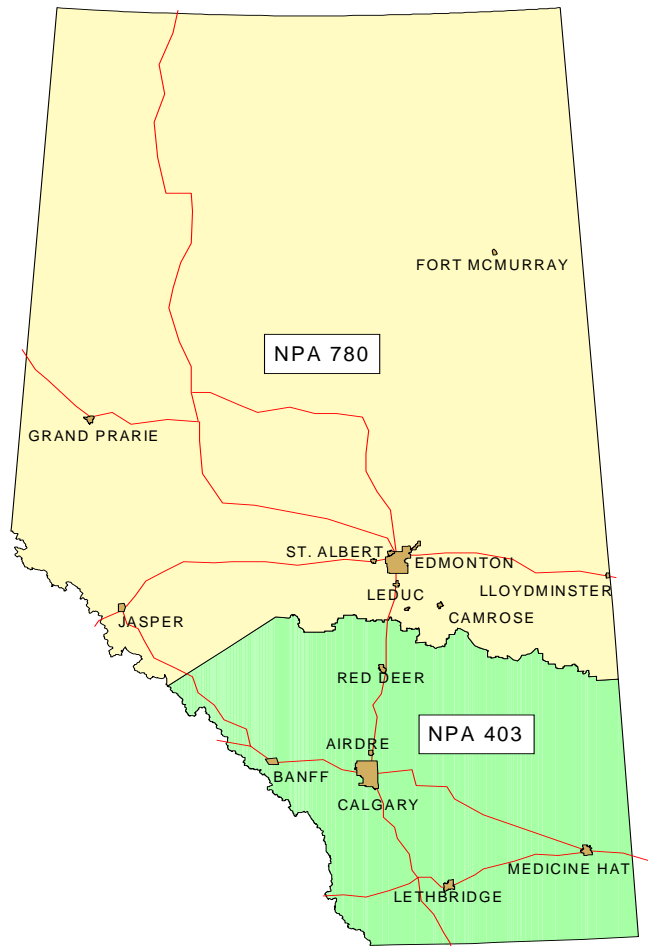


**NPA 403**



# **NUMBERING RELIEF**

**C.N.A.**



# **Initial Planning Document**

## **NPA 403 Numbering Relief**

**October 8, 2004**

Version 1 - Initial Planning Document based on July 1, 2004 Relief Planning Numbering Resource Utilization Forecast

Canadian Numbering Administrator (CNA)

Suresh Khare

613-563-7242-315

60 Queen Street, Suite 1516

Ottawa, Ontario K1P 5Y7

khares@saiccanada.com

---

## TABLE OF CONTENTS

1.	EXECUTIVE SUMMARY .....	1
2.	INTRODUCTION .....	2
3.	NPA RELIEF PLANNING PROCESS.....	3
4.	NPA RELIEF METHODS .....	4
4.1.	GEOGRAPHIC SPLIT .....	4
4.1.1.	<i>Definition</i> .....	4
4.1.2.	<i>General Attributes</i> .....	4
4.2.	OVERLAY .....	4
4.2.1.	<i>Definition</i> .....	4
4.2.2.	<i>General Attributes</i> .....	5
4.3.	BOUNDARY REALIGNMENT .....	5
4.3.1.	<i>Definition</i> .....	5
4.3.2.	<i>General Attributes</i> .....	5
4.4.	TECHNOLOGY-SPECIFIC OVERLAY .....	6
5.	NPA EXHAUST INFORMATION .....	7
6.	OPTIONS IDENTIFIED BY THE CNA IN THE IPD .....	8
6.1.	GEOGRAPHIC SPLIT .....	8
6.1.1.	<i>Geographic Split of NPA 403 (Plan 1a):</i> .....	9
6.1.2.	<i>Geographic Split of NPA 403 (Plan 1b):</i> .....	9
6.2.	CONCENTRATED OVERLAY .....	10
6.2.1.	<i>Concentrated Overlay with the new NPA covering the Calgary EAS and Outside the Calgary EAS area grows with NPA 403 (Plan 2):</i> .....	10
6.3.	DISTRIBUTED OVERLAY .....	10
6.3.1.	<i>Distributed Overlay on NPA 403 (Plan 3):</i> .....	10
6.3.2.	<i>Distributed Overlay on NPA 403 and Boundary Realignment with NPA 780 at NPA 780 Exhaust (Plan 4):</i> .....	10
6.4.	SUMMARY OF RELIEF OPTIONS .....	11
7.	IDENTIFICATION & ASSESSMENT OF RELIEF OPTIONS CONSIDERED BY THE RELIEF PLANNING COMMITTEE .....	12
8.	DIALLING CHANGES FOR LOCAL CALLS .....	13
9.	PROPOSED SCHEDULE .....	14
10.	RECOMMENDATIONS.....	16
11.	JEOPARDY CONTINGENCY PLAN .....	17

---

---

## LIST OF ANNEXES

### ANNEX A

- Figure 1 – Overview of NPA 403 and Adjacent NPAs
- Figure 2 – Major Cities and Roads in Alberta (NPA 403 and 780)
- Figure 3 – 403 Actual and Forecast CO Code Assignments
- Figure 4 – NPA 403 CO Code Exhaust 2004 G-NRUF
- Figure 5 – NPA 403 CO Code Exhaust 2004 G-NRUF
- Figure 6 – NPA 403 CO Code Exhaust July 2004 R-NRUF
- Figure 7 – NPA 403 CO Code Exhaust July 2004 R-NRUF
- Figure 8 – 7-digit Local Dialling Across Alberta NPA Boundaries
- Figure 9 – Geographic Split of NPA 403 (Plan 1a)
- Figure 10 – Geographic Split of NPA 403 (Plan 1b) (Plan 1b is similar to Plan 1a, with 403 & NEW areas reversed)
- Figure 11 – Concentrated Overlay with the new NPA covering the Calgary EAS and Outside the Calgary EAS area grows with NPA 403 (Plan 2)
- Figure 12 – Distributed Overlay on NPA 403 (Plan 3)
- Figure 13 – Distributed Overlay on NPA 403 and Boundary Realignment with NPA 780 at NPA 780 Exhaust (Plan 4)

### ANNEX B

- Table 1 – NPA 403 Exchanges and Relief Plan Options
- Table 2 – NPA 780 Exchanges and Relief Plan Options

### ANNEX C

Canadian Geographic NPAs

### ANNEX D

Industry Fora

### ANNEX E

Numbering Administration

### ANNEX F

Distribution List

---

# Initial Planning Document NPA 403 Numbering Relief

## 1. EXECUTIVE SUMMARY

Number Plan Area (NPA) 403 consists of 142 exchanges, including the rapidly growing exchanges of Calgary, Red Deer, Lethbridge, Medicine Hat, Banff, High River, located in the southern part of the province of Alberta in Canada.

The results of the 2004 General Numbering Resource Utilization Forecast (G-NRUF) indicated that NPA 403 would exhaust in September 2009. Subsequently the Canadian Numbering Administrator (CNA) initiated a Relief Planning Numbering Resource Utilization Forecast (R-NRUF). The results of the July 2004 NPA 403 R-NRUF indicated that the Central Office (CO) Codes in NPA 403 are now expected to exhaust in the 4<sup>th</sup> Quarter of 2009. The majority of the projected growth in NPA 403 is limited to 8 Exchange Areas. In the remaining 134 Exchange Areas of NPA 403 there is virtually no projected growth.

In this Initial Planning Document (IPD) the Canadian Numbering Administrator (CNA) has identified five different Relief Options to ensure that an adequate quantity of telephone numbers are available for assignment in the geographic area covered by NPA 403. The Relief Planning Committee (RPC) will use this IPD as the baseline document for the development of the Planning Document.

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.

The roles of the various participants (e.g., Canadian Radio-television and Telecommunications Commission (CRTC), CNA, CRTC Interconnection Steering Committee (CISC), RPC participants, Interested Parties) for NPA Relief Planning, are identified in section 6.0 of the CRTC approved Canadian NPA Relief Planning Guidelines, dated 13 August 2003 (the Guidelines). A copy of the Guidelines can be obtained from: [http://www.cnac.ca/npa\\_data.htm](http://www.cnac.ca/npa_data.htm).

To increase public awareness and participation in the NPA Relief Planning process, the CRTC has determined that NPA Relief Planning Committees 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 Relief Planning Committees are all open to public participation.

NPA Relief Planning shall be conducted under the regulatory oversight of the CRTC. Notwithstanding the process detailed in the Guidelines, 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 and the Relief Implementation Plan (RIP) developed and submitted to the CRTC by the RPC via the CISC process.

This IPD is being issued in accordance with the Guidelines to facilitate the selection of a consensus NPA 403 Relief Option and a Relief Date.

## 2. INTRODUCTION

On 25 January 1999, the geographic area covered by Number Plan Area (NPA) 403 was split into two geographic areas. That Relief Plan provided for a North/South split of the 403 NPA with a horizontal boundary line drawn north of the Red Deer and Stettler Exchange Areas. All areas and communities south of the boundary line retained NPA 403 and the areas and communities north of the boundary line were given the new NPA 780.

In accordance with the Canadian NPA Relief Planning Guidelines (the Guidelines), the Canadian Numbering Administrator (CNA) is required to conduct an annual General Numbering Resource Utilization Forecast (G–NRUF) in February of each year. The input from the G–NRUF is used to estimate the Projected Exhaust Date for each Canadian NPA.

The chart and data contained in Annex A, Figure 3 provides a summary of the actual Central Office (CO) Code assignments and historical G–NRUF forecasts for NPA 403. This information was used by the CNA to determine the Projected Exhaust Date for NPA 403. When an NPA is projected to exhaust within a 72-month time 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 Telecommunications Service Providers (TSPs). The objective is to ensure that users and TSPs always have access to telephone numbers and CO Codes so that their needs and requirements can be satisfied.

NPA 403 relief must be in place well in advance of reaching 747 assigned CO Codes, to allow for forecast volatility.

The rapidly growing number of CO Codes due to wireless expansion and local competition in a few specific exchanges is exhausting the number of CO Codes available for assignment in NPA 403. The July 2004 Relief Planning Numbering Resource Utilization Forecast (R–NRUF) results indicate that the majority of the projected growth in NPA 403 is limited to 8 Exchange Areas. In the remaining 134 Exchange Areas there is virtually no projected growth. See Annex A, Figure 2, for a diagram of the affected area showing Exchange Areas, major cities and highways.

It is very important to closely monitor the expansion plans of all existing and emerging TSPs to ensure that relief is provided in advance of exhaust so that CO Codes and telephone numbers are always available for TSPs and their customers, and to avoid the creation of a Jeopardy Condition and the associated need to implement Special Conservation Procedures in the area served by NPA 403. A Jeopardy Condition exists when the forecast and/or actual demand for CO Codes exceeds the quantity of CO Codes available for assignment within the NPA before it is expected that relief can be implemented.

Timely introduction of a new NPA into the affected geographic area will ensure that CO Codes and telephone numbers are always available for use by TSPs and their customers, respectively, in the geographic area requiring relief.

The NPA 403 Relief Planning Committee (RPC) will use this Initial Planning Document (IPD) as the baseline document for the development of a Planning Document that will contain recommendations for a Relief Option and a Relief Date for NPA 403. The Planning Document will be forwarded to the Canadian Radio-television and Telecommunications Commission (CRTC) via the CRTC Interconnection Steering Committee (CISC) process.

### 3. NPA RELIEF PLANNING PROCESS

The roles of the various participants (e.g., CRTC, CNA, CISC, RPC participants, Interested Parties) for NPA Relief Planning, are identified in section 6.0 of the CRTC approved Canadian NPA Relief Planning Guidelines, dated 13 August 2003. A copy of the Guidelines can be obtained from:

[http://www.cnac.ca/npa\\_data.htm](http://www.cnac.ca/npa_data.htm).

To increase public awareness and participation in the NPA Relief Planning process, the CRTC has determined that NPA Relief Planning Committees 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 Relief Planning Committees 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:

<http://www.crtc.gc.ca/cisc/COMMITTE/C-docs//CISC%202001-03-31.doc>.

NPA Relief Planning shall be conducted under the regulatory oversight of the CRTC. Notwithstanding the process detailed in the Guidelines, 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 and the Relief Implementation Plan (RIP) developed and submitted by the RPC to the CRTC via the CISC process.

Any person wishing to participate in the NPA Relief Planning process can contact the CNA and request to be added to NPA-specific 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/publicpar\\_3.htm](http://www.crtc.gc.ca/eng/publicpar_3.htm).

## **4. NPA RELIEF METHODS**

Once the necessity for NPA code relief was established, all code relief methods were considered. The following paragraphs provide definitions and general attributes of the Geographic Split, Overlay Method, Boundary Realignment and a brief description of the Technology-specific Overlay.

### **4.1. Geographic Split**

#### **4.1.1. Definition**

By this method, the exhausting NPA is split into two or more geographic areas, with one area retaining the existing NPA code, and the other(s) being assigned a new NPA code(s). To minimise the quantity of number changes, the area with the largest number of customers usually retains the existing NPA. Boundaries between old and new NPA(s) are usually determined by natural, physical or jurisdictional boundaries based on geographical features.

NPA splits have occurred with enough frequency so that technical aspects have been addressed and established implementation procedures are generally understood. Public education and acceptance of the process has been made easier because of the numerous NPA splits that have occurred throughout North America. This method generally provides long-term relief for an area.

#### **4.1.2. General Attributes**

- A known method of NPA relief, last implemented in Canada in 1999.
- Ten-digit dialling required for local calls between different NPAs.
- Number changes required within new NPA boundaries.
- Reprogramming or replacement of equipment (switches, PBXs, cellular phones, etc.).
- Some existing customers inconvenienced.
- More economic burden (businesses, public costs, stationery, etc.).
- Not as expensive to display in telephone directory.
- Requires a permissive dialling period.
- Possible boundary disputes.

### **4.2. Overlay**

#### **4.2.1. Definition**

An NPA overlay occurs when more than one NPA code serves the same geographic area. Opening up a new NPA code provides code relief when the existing NPA is exhausted. Numbers from the new NPA are assigned for new growth on a carrier neutral basis, i.e., first come first served. This method necessitates 10-digit dialling of local calls between the old and new NPAs coincident with NXX codes being implemented in the new NPA (universal 10-digit dialling for all local calls eliminates customer confusion). It has also been established that any 7-digit local calling from adjacent areas into the overlay area must be converted to 10-digit dialling at the time of relief.

The Distributed Overlay strategy may be considered in situations when growth in telephone numbers is expected to be more or less evenly distributed throughout the existing NPA requiring relief. The new NPA is "overlaid" on top of the NPA requiring relief and covers exactly the same geographic boundaries.

---



A Concentrated Overlay strategy 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 and a sparsely populated rural area could be covered by the same NPA. The new NPA would be assigned initially 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. In the area not covered by the new NPA, any future need for new CO Codes would be met by the assignment of CO Codes from the original NPA. In order to ensure that sufficient CO Codes are available for assignment from the original NPA to that section not covered by the new concentrated overlay, it is important for the new concentrated overlay to be implemented sooner than with other solutions.

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 in order to ensure that sufficient CO Codes in the original NPA are available. When relief is required in other sections of the original NPA, the geographic coverage area of the new NPA could be expanded. In some cases, more than one Concentrated Overlay could be implemented to cover different sections of a single existing NPA.

#### **4.2.2. General Attributes**

- A known method of NPA relief most recently implemented in 3 NPAs in Canada in 2001, and with 2 additional NPAs scheduled for implementation.
- Requires universal 10-digit dialling within and between NPAs.
- No number changes are required for existing customers.
- Least disruptive to end-users.
- Less economic burden for existing business.
- Same location, two or more NPAs in residence/business.
- Increased directory costs.

#### **4.3. Boundary Realignment**

##### **4.3.1. Definition**

A Boundary Realignment is when the geographic boundaries of an existing NPA requiring relief are expanded to merge with either all or part of other neighbouring NPA(s). This method may be used to defer adding a new NPA where excess capacity is available in the neighbouring NPA(s).

##### **4.3.2. General Attributes**

- Requires universal 10-digit dialling within and between NPAs.
- No number changes are required for existing customers.
- Less disruptive to end-users.
- Less economic burden for existing business.
- Same location, two or more NPAs in residence/business.
- Increased directory costs.
- Advances exhaust of neighbouring NPA(s).

---

#### **4.4. Technology-specific Overlay**

A Technology-specific Overlay is an overlay of a new NPA that is assigned specifically to one or more types of service or technology. An example of a Technology-specific Overlay is a new NPA dedicated only to wireless services. For the following reasons, this type of overlay has generally not been accepted as a preferred method:

- Would be inconsistent with regulatory practice of seeking technology-neutral solutions.
- Favours certain types of service provider, i.e. not competitively neutral.
- Inconsistent with future implementation of Local Number Portability between types of service provider or technology.
- Inconsistent with service providers' changes of type of service provider, e.g. migration from Wireless Service Provider to Local Exchange Carrier.
- Numbers in the existing NPA currently used for the service or technology to be moved to the new Technology-specific NPA would need to be changed; otherwise the new NPA would only provide relief for growth in the service or technology to which the new NPA is assigned. When existing CO Codes in the old NPA are shared between services needing a number change and services that do not need a number change, then these number changes would require that initial CO Codes be assigned in the new NPA, without freeing up any CO Codes in the old NPA, resulting in less efficient use of numbering resources and a requirement for earlier subsequent NPA Relief.
- Has not been implemented in Canada, and may cause confusion and additional costs for customers and service providers.

## 5. NPA EXHAUST INFORMATION

NPA 403 contains 142 Exchange Areas. A list of the Exchange Areas is provided in Annex B.

The results of the 2004 G-NRUF indicated that CO Codes in NPA 403 were expected to exhaust by September 2009. Results of the July 2004 R-NRUF indicate that CO Codes in NPA 403 are now expected to exhaust by October of 2009.

Refer to Annex A, Figures 4, 5, 6 and 7 for graphs that represent the rate of CO Code utilization in NPA 403 based on results from the 2004 G-NRUF and the July 2004 R-NRUF.

Currently both 7-digit and 10-digit local dialling is permitted within NPA 403, as shown in Figure 8 of Annex A. There is some primary and secondary Extended Area Service (EAS) local dialling between the bordering exchanges of NPA 403 and adjacent NPA 780; hence assignment of corresponding CO Codes is restricted in certain NPA 403 Exchange Areas to permit 7-digit local dialling between NPA 403 and NPA 780. The reverse situation is applicable in NPA 780.

7-digit local dialling between NPA 403 and adjacent NPA 406 exists only for Coutts, Alberta and Sweetgrass, Montana. The CO Code 335 corresponding to the current CO Code of Montana's Sweetgrass Exchange Area is a working CO Code assigned to the Didsbury Exchange Area in NPA 403, which does not have EAS with the Coutts Exchange Area; therefore an assignment restriction for 403/335 is not required in the Coutts Exchange Area at this time. However, for jurisdictional reasons and to avoid customer confusion, CO Code 406 in NPA 403 and the relief NPA should not be assigned in the Coutts Exchange Area.

To eliminate CO Code protection in the NPA 403 area, dialling changes would be required in the adjacent NPAs, or CO Code assignment restrictions would be maintained in the Exchange Areas of NPA 403 which have primary and secondary EAS with adjacent NPAs.

## 6. OPTIONS IDENTIFIED BY THE CNA IN THE IPD

Four alternatives, comprising five Relief Options are included in the Initial Planning Document.

The following alternatives were examined in detail.

1. Geographic Split (one option with two sub-options);
2. Concentrated Overlay (one option);
3. Distributed Overlay (one option);
4. Distributed Overlay with Boundary Realignment (one option)

These Relief Options were evaluated using the assumptions shown below:

- A. The Relief Date for three of the Relief Options will be 1<sup>st</sup> Q 2008 (approximately 18 months prior to the NPA 403 Projected Exhaust Date of 3Q 2009 identified by the July 2004 R-NRUF results). These Relief Options include one Geographic Split option and two different Distributed Overlay options.
- B. The Relief Date for the option that uses a Concentrated Overlay will be 1<sup>st</sup> Q 2007 (approximately 30 months prior to the NPA 403 Projected Exhaust Date of 3Q 2009, identified by the July 2004 R-NRUF results). This length of time is required to ensure that a sufficient number of CO Codes remain available to provide for the future growth of NPA 403.
- C. NPA Relief Planning should avoid creating Protected CO Codes due to cross-NPA border 7-digit local dialling patterns.

See Annex A, Figures 9 through 13 for diagrams of the Relief Options identified by the CNA.

### 6.1. *Geographic Split*

Existing physical features do not easily lend themselves for use as boundaries to split NPA 403. Consequently, existing Incumbent Local Exchange Carrier (ILEC) Calgary EAS boundaries were chosen for the split of NPA 403.

With the Calgary EAS as a split boundary, Alberta's population by numbering area, derived from Alberta Government statistics, would become:

## Alberta 2003 Population – by NPA and major EAS areas

NPA	Area	Population	% of NPA	% of Alberta
403	Calgary & its Local Calling Area (EAS)	1,050,384	65.2	34.0
	Outside Calgary's Local Calling Area (EAS)	561,491	34.8	18.2
	NPA 403 Total	1,611,875	100.0	52.1
780	Edmonton & its Local Calling Area (EAS)	968,727	65.5	31.3
	Outside Edmonton's Local Calling Area (EAS)	511,229	34.5	16.5
	NPA 780 Total	1,479,956	100.0	47.9
Alberta Total		3,091,831	-	100.0

Using the Calgary EAS as the split boundary, two Geographic Split sub-options were assessed.

With these sub-options, number changes would be required either in the Calgary EAS or outside the Calgary EAS (i.e., the remainder of NPA 403 area).

### **6.1.1. Geographic Split of NPA 403 (Plan 1a):**

The Calgary EAS portion of NPA 403, with 18 Exchange Areas would retain NPA 403, and the remainder of NPA 403, comprising 124 Exchange Areas, would be assigned the new NPA. The area that would retain NPA 403 contains the rapidly growing Exchange Area of Calgary, while the new NPA would contain the rapidly growing Exchange Areas of Red Deer, Lethbridge and Medicine Hat. Using this Relief Sub-option, approximately 0.562 million people outside the Calgary EAS would be affected by a telephone number change.

After the split, NPA 403 and the new NPA would be expected to exhaust in 2019 and 2041 respectively.

This Relief Option would increase the number of separate Relief Planning areas in Alberta from two to three, and three new NPAs would be required in the province during the next 20 year period.

### **6.1.2. Geographic Split of NPA 403 (Plan 1b):**

The 124 Exchange Areas outside the Calgary EAS portion of NPA 403 would retain NPA 403, and the Calgary EAS portion of NPA 403, with 18 Exchange Areas, would be assigned the new NPA. Using this Relief Sub-option, approximately 1.050 million people in the Calgary EAS would be affected by a telephone number change. The larger quantity of number changes required by this sub-option is a drawback compared to the quantity of number changes required by Plan 1a.

After such a split, NPA 403 and the new NPA would be expected to exhaust in 2041 and 2019, respectively.

This Relief Option would increase the number of separate Relief Planning areas in Alberta from two to three, and three new NPAs would be required in the province during the next 20 year period.

## **6.2. Concentrated Overlay**

One Relief Option was evaluated to introduce the new NPA in the NPA 403 area using a Concentrated Overlay method of providing NPA relief.

The main advantage of all alternatives that would introduce an Overlay method as opposed to the Split method is that number changes are not required. However introduction of an overlay NPA eliminates 7-digit local dialling and introduces 10-digit local dialling throughout the overlay area.

### **6.2.1. Concentrated Overlay with the new NPA covering the Calgary EAS and Outside the Calgary EAS area grows with NPA 403 (Plan 2):**

This Relief Option would overlay a new NPA over the Calgary EAS portion of the NPA 403 area, which comprises 18 Exchange Areas. The portion of NPA 403 outside the Calgary EAS, consisting of the remaining 124 Exchange Areas, would continue to grow using the remaining CO Codes available for assignment in NPA 403.

With such an overlay, NPA 403 and the new NPA would be expected to exhaust in 2015 and 2031, respectively.

This option increases the number of separate Relief Planning areas in Alberta from two to three, and three new NPAs would be required in the province during the next 20 years.

## **6.3. Distributed Overlay**

One Relief Option was evaluated to introduce the new NPA using the Distributed Overlay method of providing NPA relief.

### **6.3.1. Distributed Overlay on NPA 403 (Plan 3):**

This Relief Option would overlay a new NPA over all 142 Exchange Areas in NPA 403. NPA 403 and the new NPA would be expected to exhaust in 2009 and 2027, respectively.

This option would maintain the number of separate Relief Planning areas in Alberta at two, and two new NPAs would be required in the province during the next 20 years.

### **6.3.2. Distributed Overlay on NPA 403 and Boundary Realignment with NPA 780 at NPA 780 Exhaust (Plan 4):**

This Relief Option would initially overlay a new NPA over all 142 Exchange Areas in NPA 403. When NPA 780 approaches exhaust, the boundaries of NPA 403 and the new NPA would be realigned to include the existing 195 Exchange Areas of NPA 780 (i.e., all 337 Alberta Exchange Areas).

NPAs 403, 780 and the new NPA would be expected to exhaust in years 2009, 2012 and 2020, respectively.

This option would reduce the number of separate Relief Planning areas in Alberta from two to one, and two new NPAs would be required in the province during the next 20 years.

#### 6.4. Summary of Relief Options

The following table summarizes alternative options:

Plan	Description	Exhaust Dates				Relief - Timing & Type		Populati on Affected by Number changes in Million	Local Dial # D
		NPA 403	New NPA 1	New NPA 2	NPA 780	Dates (area) [thru 2025 only]	Type		
1a	Geographic Split of NPA 403 - Out of Calgary EAS gets new NPA, and Calgary EAS grows with NPA 403	2019	2041	2044	2012	<b>2008</b> (403) <b>2017</b> (403) <b>2010</b> (780)	S O S/O*	0.562 Nil ?m/Nil*	7 7>10 7/10*
1b	Geographic Split of NPA 403 - Calgary EAS gets new NPA, and Out of Calgary EAS grows with NPA 403	2041	2019	2072	2012	<b>2008</b> (403) <b>2017</b> (New NPA 1) <b>2010</b> (780)	S S/O* S/O*	1.050 ?m/Nil* ?m/Nil*	7 7/10* 7/10*
2	Concentrated Overlay with the new NPA covering the Calgary EAS and Outside the Calgary EAS area grows with NPA 403	2015	2031	2068	2012	<b>2007</b> (403) <b>2013</b> (403) <b>2029</b> (New NPA 1) <b>2010</b> (780)	S/O* S/O* O S/O*	Nil ?m/Nil* Nil ?m/Nil*	7>10 7/10* 10 7/10*
3	Distributed Overlay on NPA 403 area	2009	2027	2044	2012	<b>2008</b> (403) <b>2025</b> (New NPA 1) <b>2010</b> (780)	O O S/O*	Nil Nil ?m/Nil*	10 10 7/10*
4	Distributed Overlay on NPA 403 area, with 780 NPA Boundary Realignment at NPA 780 Exhaust	2009	2020	2029	2012	<b>2008</b> (403) <b>2018</b> (New NPA 1) <b>2010</b> (780)	O O O	Nil Nil Nil	7>10 10 7>10
Key	D = Digit, <b>Bold</b> = Dates of new NPAs, Bdy rign = Boundary realignment, O = Overlay, S= Split, * = Options, > = conversion								

## **7. IDENTIFICATION & ASSESSMENT OF RELIEF OPTIONS CONSIDERED BY THE RELIEF PLANNING COMMITTEE**

The Relief Planning Committee considered the IPD developed by the CNA and, based upon discussion, identified a total of **XX** potential Relief Options for consideration. These Options are listed as follows:

**To be completed by the RPC.**



## 8. DIALLING CHANGES FOR LOCAL CALLS

The following tables reflect the dialling arrangement for Local calls for Splits, Overlay and Boundary Realignment. The Toll call dialling arrangement is not impacted due to the NPA relief.

The tables below identify recommended modifications to the local dialling plans in NPA 403, the NPA 403 Relief NPA, as well as in neighbouring NPA 780.

### Local Dialling Plan for Customers in 403 NPA

Dial Plan Scenarios	Today	After 403 Split	After 403 Overlay	After Overlay / Boundary alignment
Landline to Wireless within NPA	7-digits	7-digits	10-digits	10-digits
Landline to Wireless from NPA 403 to Adjacent NPAs	7-digits	10-digits	10-digits	10-digits
Landline to Landline within NPA	7-digits	7-digits	10-digits	10-digits
Landline to Landline from NPA 403 to Adjacent NPAs	7-digits	10-digits	10-digits	10-digits
Wireless to Wireless within NPA	7-digits	7/10-digits	10-digits	10-digits
Wireless to Wireless from NPA 403 to Adjacent NPAs	10-digits	10-digits	10-digits	10-digits

### Local Dialling Plan for Customers in 403 Relief NPA

Dial Plan Scenarios	Today	After 403 Split	After 403 Overlay	After Overlay / Boundary alignment
Landline to Wireless within NPA	N/A	7-digits	10-digits	10-digits
Landline to Wireless from Relief NPA to Adjacent NPAs	N/A	10-digits	10-digits	10-digits
Landline to Landline within NPA	N/A	7-digits	10-digits	10-digits
Landline to Landline from Relief NPA to Adjacent NPAs	N/A	10-digits	10-digits	10-digits
Wireless to Wireless within NPA	N/A	7/10-digits	10-digits	10-digits
Wireless to Wireless from Relief NPA to Adjacent NPAs	N/A	10-digits	10-digits	10-digits

### Local Dialling Plan for Customers in Neighbouring 780 NPA

Dial Plan Scenarios	Today	After 403 Split	After 403 Overlay	After Overlay / Boundary alignment
Landline to Wireless within NPA	7-digits	7-digits	7-digits	10-digits
Landline to Wireless from NPA 780 to Adjacent NPAs	7-digits	7-digits	7-digits	10-digits
Landline to Landline within NPA	7-digits	7-digits	7-digits	10-digits
Landline to Landline from NPA 780 to Adjacent NPAs	7-digits	7-digits	7/10-digits	10-digits
Wireless to Wireless within NPA	7/10-digits	7/10-digits	7/10-digits	10-digits
Wireless to Wireless from NPA 780 to Adjacent NPAs	10-digits	10-digits	10-digits	10-digits

## 9. PROPOSED SCHEDULE

The Relief Planning Committee developed the following proposed schedule using the best available information at this 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.

<b>NPA 403 Relief Planning Timeline</b>					
		<b>Time</b>	<b>Cumulative</b>	<b>Start</b>	<b>End</b>
<b>Number</b>	<b>Task or Event</b>	<b>Required</b>	<b>Time</b>	<b>Date</b>	<b>Date</b>
		<b>(months)</b>	<b>(months)</b>		
1	CNA identifies NPA exhaust and notifies by e-mail CRTC staff, CSCN, NANPA & CISC that the NPA will exhaust*	2	2	02-04	04-04
2	CNA conducts R-NRUF and begins preparation of IPD	2	5	05-04	07-04
3	CRTC issues Public Notice to establish RPC and Interested Parties list. CNA announces the date for the initial NPA Relief Planning meeting, requests contributions and issues the initial press release.	3	8	08-04	10-04
4	CNA completes and distributes IPD to RPC	N/A	N/A	09-04	09-04
5	RPC participants review IPD	2	9	09-04	11-04
6	CNA chairs initial RPC meeting to present, explain and discuss the NPA Relief Planning process and the IPD. RPC schedules next meeting/conference call	N/A	9	11-04	11-04
7	CNA distributes revised IPD based upon initial meeting discussions	2	11	11-04	01-05
8	RPC participants provide comments on revised IPD as contributions to the RPC	RPC to complete balance of table			
9	RPC participants review contributions, if any, prior to second meeting/conference call				
10	CNA chairs subsequent RPC meetings/conference calls to finalize Planning Document				
11	CNA revises and forwards Planning Document (PD) to the CISC and CRTC				
12	CISC reviews and forwards PD to the CRTC for approval				
13	CRTC initiates a process to approve/revise the PD and establish the Relief Option and Relief Date				
14	Interested Parties submit comments and reply comments to CRTC				
15	CRTC issues Decision & directs RPC to develop an NPA Relief Implementation Plan (RIP)				
16	CNA requests and obtains assignment of Relief NPA(s) from the NANPA and schedules meeting of RPC to develop a consensus RIP and Planning Letter (PL)				
17	CNA chairs RPC meeting to create Task Forces				

<b>NPA 403 Relief Planning Timeline</b>		<b>Time</b>	<b>Cumulative</b>	<b>Start</b>	<b>End</b>
<b>Number</b>	<b>Task or Event</b>	<b>Required (months)</b>	<b>Time (months)</b>	<b>Date</b>	<b>Date</b>
18	RPC and its Task Forces develop and obtain consensus on the various components of the RIP and PL (a series of meetings/conference calls might be required)				
19	CNA forwards consensus RIP to CISC and the PL to NANPA				
20	CISC reviews and forwards RIP to the CRTC for approval				
21	CRTC approves RIP and notifies Interested Parties				
22	CNA issues second media release and sends approved RIP to NANPA, TRA, LNP Consortium and RPC members				
23	Task Forces, Telecommunications Service Providers and users execute the RIP				
24	Permissive Dialling Period in the event of a Split / 7- to 10- digit Dialling Transition Period in the event of an Overlay (To be determined based upon CRTC approved Relief Option)				
25	Relief Date (generally 12 to 18 months prior to the Projected Exhaust Date) (TBD)				
26	CNA submits Final Report to CISC within two months of Relief implementation				
27	Projected Exhaust Date			10-09	

\* When an NPA is projected to exhaust within a 72 months period, the CNA must commence the Relief Planning process.

\*\* In the event that a new NRUF or actual demand indicates that the exhaust date will change significantly, the CNA may convene a meeting of the NPA Relief Planning Working Group to review the issue and make a recommendation to the CISC and CRTC.

## 10. RECOMMENDATIONS

Based upon its analysis of the Relief Options, the Relief Planning Committee recommends that:

To be completed by RPC.

---

## 11. JEOPARDY CONTINGENCY PLAN

The CNA has developed the following Jeopardy Contingency Plan (JCP), based on the template contained in Appendix I to the Canadian NPA Relief Planning Guidelines, for inclusion in the IPD for NPA 403.

The following measures shall be implemented by all CO Code Holders in NPA 403 once approved by the CRTC and following the declaration of a Jeopardy Condition by the CNA.

- 1) During a Jeopardy Condition, code applicants shall submit all code applications and related correspondence for the jeopardy NPA to CRTC staff in addition to the CNA. The CNA will work closely with CRTC staff in the analysis of these applications.
  - 2) Telecommunications Service Providers (TSPs) will implement the following conservation methods when a Jeopardy Condition is declared:
    - a) age disconnected residential telephone numbers for a maximum of two months;
    - b) age disconnected wireless telephone numbers for a maximum of three months;
    - c) age disconnected business 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) 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) all CO Code Holders 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) the quantity of reserved numbers shall not 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) within 45 days from the date that the CNA declares a Jeopardy Condition, CO Code Holders shall 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, as per these Special Conservation Procedures. Once the 45-day period has elapsed, the CNA shall make any reserved CO Codes that has not been assigned and for which it has not received a Part 1 Form available for general assignment. 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) reservations of CO Codes will not be permitted until NPA relief is provided.
    - i) for all CO Codes that were assigned prior to the Jeopardy Condition being declared, the CO Codes must be placed 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. The CNA shall initiate reclamation procedures for all CO Codes that have not been placed In-Service within this timeframe.
    - j) reclaimed CO Codes will be made available for general assignment after a three-month aging period.
  - 3) 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 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.
- 4) When applying for a CO Code for growth, CO Code Holders shall, for the switching entity/POI:
    - a) complete and submit the attached Telephone Number Utilization Report Form;
    - b) certify that all held telephone numbers have been released;
    - c) certify that reserved numbers do not exceed ten percent of the total quantity of numbers;
    - d) certify that all existing CO Codes per service provided by that switching entity or POI, are projected to exhaust within four months and provide supporting documentation (i.e., complete Appendix B Months to Exhaust Certification Worksheet); and,
    - e) certify that each reseller's/dealer's inventory has been reduced to an amount equal to two times the highest month's end customer number assignment rate from the previous year for that reseller/dealer. This certification must be provided at the time of applying for a CO Code for growth or within 60 days from the date that the CNA declares a Jeopardy Condition, whichever is later. In the event that the Code Applicant does not submit the certification within 60 days of the date the CNA declares a Jeopardy Condition, then the CNA shall advise Commission staff. Exceptional issues (e.g., inventory provision for start-up resellers/dealers, inventory provision for resellers/dealers that anticipate activations in excess of historical trends, and resellers/dealers that refuse to cooperate in reducing their inventories) may be referred to the Commission for resolution.
  - 5) 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.
  - 6) A TSP 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.
  - 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 Telecommunications Service Provider. 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 potential and current CO Code Holders quarterly until 3 months before relief is provided. The initial J- NRUF input will be used as a baseline for comparison of subsequent J- NRUF input as well as 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 Provider. If the CNA is dissatisfied with the reasonableness, or the rationale provided for the deviations, then the matter will be referred to the Commission.
-

- 
- 9) In the absence of a J- NRUF from a Code Holder or proposed Competitive Local Exchange Carrier (CLEC), the CNA will request a complete J- NRUF from that entity prior to the assignment of an initial CO Code from the pool of CO Codes set aside for Initial Code Applicants.
  - 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 Code Applicant and if the 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) This JCP shall remain in effect until NPA Relief has been implemented.
  - 14) 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.
  - 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, then it is anticipated that further CO Code conservation and assignment procedures will be ordered by the Commission (e.g., rationing, lottery, etc.).

**Telephone Number Utilization Report**

Entity Name: \_\_\_\_\_  
 Address : \_\_\_\_\_  
 Telephone: \_\_\_\_\_  
 E-Mail : \_\_\_\_\_  
 Date : \_\_\_\_\_

Contact name: \_\_\_\_\_  
 City, Prov/Terr, Postal code: \_\_\_\_\_  
 Facsimile: \_\_\_\_\_

Telephone Number Utilization for: Switch/POI CLLI: \_\_\_\_\_  
Exchange Name \_\_\_\_\_ Province / Territory : \_\_\_\_\_

NPA	NXX	Portable (Y or N)	Quantities of Telephone Numbers							% Utilization
			Reseller Inventory	Assigned	R&H	Admin	Ported Out	Available	Aging	
<b>TOTAL</b>										

% Utilization = (Reseller Inventory+Assigned+R&H+Admin+Ported Out+Aging)/(100)



### NPA 403CO Code Inventory Chart

The Chart below will be completed in the event the CNA declares a Jeopardy Condition.

The Chart shown below summarizes the status of CO Codes in NPA 403 as at [CNA ENTER DATE HERE]. It identifies 20 "Unassignable" and 11 "Assignable CO Codes in a Jeopardy Condition". The "Assignable CO Codes in a Jeopardy Condition" shall only be made available for assignment in the event that all other CO Codes available for assignment are assigned. The order of assignment of the "Assignable CO Codes in a Jeopardy Condition" would be as indicated in the chart

<b>A</b>	Total CO Codes In an NPA (NXX format)	<b>800</b>
	<b>Unassignable CO Codes:</b>	
	N11 Service Codes (211, 311, 411, 511, 611, 711, 811, 911)	8
	Special Use Codes (555, 950 & 976)	3
	Protected Codes	0
	Home NPA(s) (XXX)	1
	Reserved NPAs for Future Relief of Home NPA (see note 1)	3
	Current Neighboring NPA (see note 2)	1
	Reserved NPAs for Future Relief of Neighboring NPAs	0
	Plant Test Codes (958 & 959)	2
	Special 7-digit Dialling Codes (610 & 810)	2
<b>B</b>	Subtotal	<b>20</b>
<b>C</b>	Net (C=A-B)	<b>780</b>
	<b>Assignable CO Codes in a Jeopardy Condition:</b>	
	911 Misdial Codes (912, 914 & 915) (assign 1st)	3
	N00 Codes (assign 2nd)	8
<b>D</b>	Subtotal	<b>11</b>
<b>E</b>	Net (E=C-D)	<b>769</b>
<b>F</b>	Assigned Codes as of XXXXXXXXX	
<b>G</b>	Net (G=E-F)	
<b>H</b>	Codes Set Aside for Future New Entrants	<b>4</b>
<b>I</b>	Available for Assignment as of XXXXXXXX (I=G-H)	
<b>J</b>	Available for Assignment in Jeopardy Condition (J=D+I)	

- (1) The CNA advises that this NPA will exhaust 1 time over the 20 year forecast period.
- (2) Current neighbouring NPAs are: NPAs 250, 306, 780 and 406, but NXXs 250 and 306 are working CO Codes and 406 is available outside Coutts EAS Exchanges in NPA 403.

**NPA 403**  
**INITIAL PLANNING DOCUMENT**  
**ANNEXES**