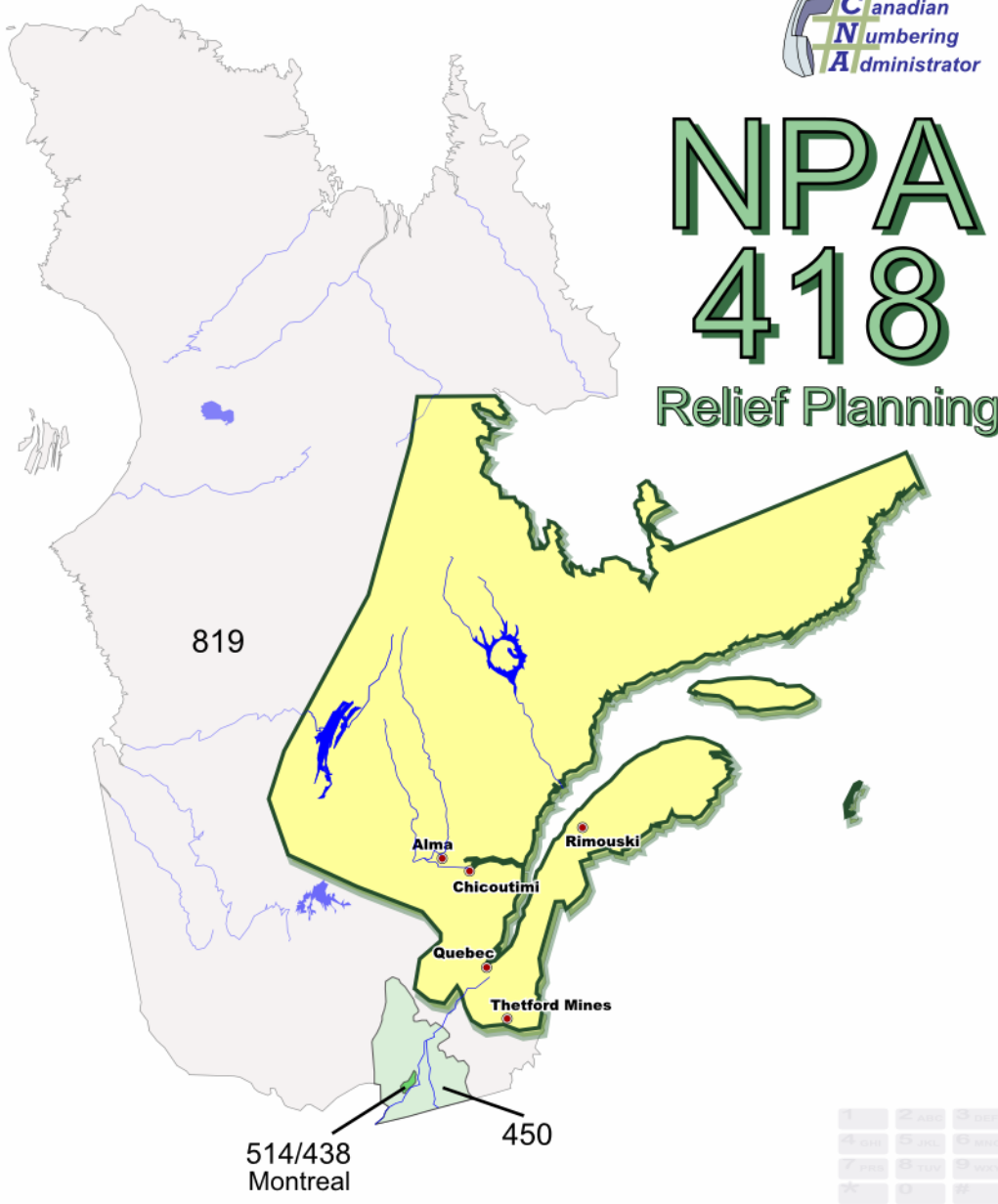


# Planning Document NPA 418 Numbering Relief



# NPA 418 Relief Planning



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# Planning Document NPA 418 Relief

## 1. EXECUTIVE SUMMARY

NPA 418 consists of 258 Exchange Areas, including the rapidly growing exchanges of Québec, Rimouski, Chicoutimi, Rivière-du-Loup, St-Georges-de-Beauce and Thetford Mines in the northern and eastern parts of the province of Québec in Canada.

The results of the January 2006 General Numbering Resource Utilization Forecast (G-NRUF) indicated that NPA 418 would exhaust by December 2013. At the request of Canadian Radio-television and Telecommunications Commission (CRTC) staff, the Canadian Numbering Administrator (CNA) conducted a Special August 2006 Wireless Number Portability (WNP) NRUF. Those results indicated that the Projected Exhaust Date had advanced to March 2012. Subsequently, the CNA conducted an initial Relief Planning Numbering Resource Utilization Forecast (R-NRUF) for NPA 418 with a due date of February 7, 2007. The January 2007 R-NRUF captured the impacts of the planned introduction of WNP and Telecom Decision CRTC 2004-46 (*Trunking arrangements for the interchanger of traffic and the point of interconnection between local exchange carriers*) and the results indicated that NPA 418 is now projected to exhaust in October 2008.

The objective of the NPA Relief Planning process is to ensure that Central Office (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., CRTC, CNA, CRTC Interconnection Steering Committee (CISC), Relief Planning Committee 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.crtc.gc.ca/public/cisc/n-docs/NPAGuidelines.doc>.

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 Planning Document identifies 14 different Relief Options for consideration as potential methods to ensure that an adequate quantity of telephone numbers is available for assignment in the geographic area covered by NPA 418.

Based upon its analysis of the Relief Options the following is a high level summary of the recommendations submitted by the RPC:

- relief for NPA 418 be implemented using the Distributed Overlay option 5a if a CRTC Decision can be obtained by the end of August 2007 and, if not, by using Distributed Overlay option 5b;
- NPA 581 be selected as the Relief NPA for NPA 418. The rationale for this recommendation is explained in more detail in the last paragraph of the introductory part of section 6;
- the relief date be 19 September 2008 in accordance with the schedule contained in this planning document;
- if Distributed Overlay Relief option 5a is approved by the end of August 2007, it be implemented with a 7- to 10-digit dialling transition period from 23 June 2008 to 8 September 2008 in accordance with the schedule;
- a standard network announcement be implemented during the 7- to 10-digit local dialling transition period;
- the local dialling plan for customers within the NPA 418 area be changed to 10-digits for all local calling originating within the NPA 418 area;
- 7-digit local dialling that currently exists from Campbellton in NPA 506 (New Brunswick) and from Labrador City – Wabush in NPA 709 (Newfoundland-Labrador) into NPA 418 be allowed to continue after NPA 418 relief;
- three CO Codes from NPA 418 should be initially set aside in a "Pool for Initial Code Assignments" to entities making an application for an Initial Code in an exchange during the two year period following the introduction of the overlay NPA and that the quantity of set aside codes be increased to ten (or as many are still available, if less than ten) 66 days prior to relief;
- if a Distributed Overlay option is approved, the RPC recommends that where a TSP's network equipment does not support an announcement followed by cut-through, the TSP would not be required to provide announcement plus cut-through during the transition period, and only be required to provide permissive 7/10 digit dialling with no announcement until 10-digit dialling becomes mandatory. In such cases, TSPs would also be required to use additional and/or alternative methods of educating customers in the affected communities. Such methods of education could include, but may not be limited to, advertisements in local newspapers (in areas where local newspapers are published), notices provided to customer using their billing notification method (e.g. paper mail or email), and information on websites;
- NPA 418 CO Codes 273, 367, 437, 460, 468, 474, 506, 537, 579, 709, 753, and 942, which are assignable in a Jeopardy Condition, should remain assignable when the Jeopardy Condition ends, with some limited availability for CO Code 506. See the NPA 418 CO Code Inventory Chart in the Jeopardy Contingency Plan for details; and
- when NPA 819 relief is addressed, this RPC recommends the NPA 819 RPC and the CRTC consider extending the boundary of the new NPA used to relieve NPA 418 to cover the NPA 819 area, as the NPA 418 RPC views this as a desirable option unless there are significant changes in circumstances. This proposal for the future relief of NPA 819 is based on the current forecast of future requirements in NPAs 418 and 819. Carriers and customers should not take any action based on a future boundary extension of the new NPA over NPA 819 until a final CRTC Decision is issued on NPA 819 closer to its relief date.

If a CRTC Decision is issued by the end of August 2007, the RPC believes that option 5a can be implemented by September 2008 with a 7- to 10-digit dialling transition period between June and September 2008. However, if a CRTC Decision is not issued by the end of August 2007, then this option may not provide relief until after exhaust has occurred, with potentially adverse effects on carriers, and particularly on those planning to compete in new markets and serve new customers. In the event that a CRTC Decision is not issued by the end of August 2007 or immediately, thereafter then the RPC submits that option 5b might have to be implemented to avoid a CO Code and numbering shortage and the Relief Implementation Plan will have to be revised.

## 2. INTRODUCTION

NPA 418 consists of 258 exchanges, including the rapidly growing exchanges of Québec, Rimouski, Chicoutimi, Rivière-du-Loup, St-Georges-de-Beauce and Thetford Mines in the northern and eastern parts of the province of Québec in Canada.

In accordance with 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 2, provides a summary of the actual and forecast quantities of Central Office (CO) Code assignments for current and previous Number Resource Utilization Forecasts (NRUFs) for NPA 418. This information was used by the CNA to determine the Projected Exhaust Date for NPA 418.

When an NPA is projected to exhaust within 72 months, 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 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.

The January 2006 G-NRUF indicated that NPA 418 would exhaust by December 2013. At the request of Canadian Radio-television and Telecommunications Commission (CRTC) staff, the Canadian Numbering Administrator (CNA) conducted a Special August 2006 Wireless Number Portability (WNP) NRUF. Those results indicated that the Projected Exhaust Date had advanced to March 2012. Subsequently, the CNA conducted an initial Relief Planning Numbering Resource Utilization Forecast (R-NRUF) for NPA 418 with a due date of February 7, 2007. The January 2007 R-NRUF captured the impacts of the planned introduction of WNP and Telecom Decision CRTC 2004-46 (*Trunking arrangements for the interchanger of traffic and the point of interconnection between local exchange carriers*) and the results indicated that NPA 418 is now projected to exhaust in October 2008. The February 2007 R-NRUF results indicated that the majority of the projected CO Code growth in NPA 418 is limited to the first two years of the forecast. The results of that R-NRUF showed the CO Code growth is spread over a large number of Exchange Areas. See Annex A, Figure 18 for a diagram showing major cities, highways and rivers.

It is very important to closely monitor the future CO Code requirements 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. Due to the significant advance in the Projected Exhaust Date described above, the CNA declared a Jeopardy Condition in NPA 418 on March 23, 2007 and Special Conservation Procedures were put in place as per section 8.3 of the Guidelines. On May 28, 2007 the CRTC in Telecom Public Notice 2007-8 approved a Jeopardy Contingency Plan. 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.

### 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.crtc.gc.ca/public/cisc/n-docs/NPAGuidelines.doc>.

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/eng/ciscmanu.htm>

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.htm>.

## 4. NPA RELIEF METHODS

Once the necessity for NPA code relief was established, all NPA 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 similar-size requirements for numbering resources, 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) may follow natural, physical or jurisdictional boundaries based on geographical features where such alignments are suitable. Boundaries are chosen to avoid splitting Exchange Areas.

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.*
- *7-digit dialling is retained for local calls within NPAs.*
- *If CO Code protection is not implemented, 10-digit dialling is required for local calls between different NPAs.*
- *Number changes required within new NPA boundaries.*
- *the time required to transition to a new NPA with a split is usually longer than the time needed to transition to mandatory 10-digit dialling for a first-time overlay.*
- *Reprogramming or replacement of equipment (switches, PBXs, cellular phones, etc.).*
- *Some existing customers inconvenienced.*
- *More economic burden (businesses, public costs, stationery, etc.).*
- *May not be 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. Exceptions to this policy may be considered if there is a need for continued code protection (i.e., for 7-digit local dialling across an NPA boundary).

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.

Since 1995 the majority of NPA reliefs in Canada have used the Overlay Method (concentrated or distributed).

#### **4.2.2 General Attributes**

- *A known method of NPA relief most recently implemented in Canada in parts of Ontario and Québec in 2006.*
- *Requires mandatory 10-digit local dialling throughout the NPAs being relieved, and generally from adjacent NPAs into NPAs being relieved, usually at the time of relief or of a previous overlay relief. 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.*
- *Directory costs may increase.*
- *If mandatory 10-digit dialling does not exist in the NPAs 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 NPA split.*

### **4.3 Boundary Realignment**

#### **4.3.1 Definition**

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

#### **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**

#### **4.4.1 Definition**

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.

With the introduction of WNP in Canada, telephone numbers can be moved between wireline and wireless services, therefore the use of an NPA cannot be limited to one type of service or technology, and this method is not viable.

#### **4.4.2 General Attributes**

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 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 418 contains 258 Exchange Areas. The exchanges in NPA 418 are listed in Annex B Table 1.

As indicated in the following table, NRUFs for NPA 418 were used to determine Projected Exhaust Date, i.e. the dates when CO Codes in NPA 418 would be expected to exhaust.

NRUF	Projected Exhaust Date
G-NRUF January 2006	December 2013
August 2006 Special WNP-NRUF	March 2012
R-NRUF January 2007	October 2008
J-NRUF April 2007	October 2008

Refer to Annex A, Figures 3, 4, 5 and 6 for graphs that represent the rate of CO Code utilization in NPA 418.

Currently 7-digit local dialling is permitted within NPA 418. There is 7-digit local dialling between NPA 418 (Matapédia and Pointe-à-la-Croix) and adjacent NPA 506 (Campbellton, NB) and between NPA 418 (Fermont) and adjacent NPA 709 (Labrador City – Wabush, NL). Mandatory 10-digit local dialling between NPA 418 and NPA 819 was introduced in 2006. All the protected CO Codes corresponding to those in the Campbellton EAS area, and all but one of the protected CO Codes assigned in the Labrador City - Wabush exchange have been assigned in NPA 418 exchanges, with the one remaining unassigned protected CO Code in NPA 418 available for assignment outside Fermont.

NPA relief will have the following impacts on dialling for local calls originated in the NPA 418 area or in adjacent NPAs:

- *Calls within the NPA 418 area* – if the relief method is a split, existing 7-digit dialling would be retained; if an overlay, existing 7-digit dialling would be eliminated and 10-digit local dialling would become mandatory
- *Calls between the NPA 418 area and adjacent NPA 819* - local dialling is already mandatory 10-digit and would not change.
- *Calls from the NPA 418 area into adjacent NPAs 506 and 709* - if the relief method is an overlay, local dialling from the NPA 418 area into NPAs 506 and 709 must change to mandatory 10-digit since an overlay of NPA 418 eliminates 7-digit dialling on all local calls originated in NPA 418. If the relief method is a split, local dialling from the NPA 418 area into NPAs 506 and 709 could change to mandatory 10-digit, or could stay as 7-digit with a small amount of CO Code protection added in the new NPA if it is adjacent to NPAs 506 and/or 709.
- *Calls from adjacent NPAs 506 and 709 into the NPA 418 area* - relief either will require local dialling from Campbellton, NB, and Labrador City - Wabush, NL into the NPA 418 area to change to mandatory 10-digit, or will allow it to stay as 7-digit. If the relief is an

overlay of a new NPA or a split with a new NPA adjacent to NPAs 506 and 709, then retention of 7-digit dialling would require a small additional amount of CO Code protection, i.e. availability of CO Codes from the new NPA slightly limited in Matapédia, Pointe-à-la-Croix and Fermont. *This protection would not reduce the life of the NPA 418 relief, and would allow Campbellton NB and Labrador City - Wabush NL to avoid a dialling transition that would result in a mix of 7- and 10-digit local dialling.*

## 6. RELIEF OPTIONS

The four NPA relief methods described in this Planning Document (PD) are the Geographic Split, the Overlay, the Boundary Realignment, and the Technology-specific Overlay.

Based on the first three of the above methods used alone and in combination, the following 14 relief options were identified and examined in detail:

- Geographic Split - 6 options (Plans 1a, 1b, 2a, 2b, 3a and 3b)
- Boundary Realignment – 2 options (Plans 4a and 4b)
- Distributed Overlay - 6 options (Plans 5a, 5b, 5c, 5d, 5e and 5f)

In March 2007, the CNA declared a Jeopardy Condition in NPA 418 and established the Projected Exhaust Date as October 2008. Relief Options using the Concentrated Overlay and the Technology-specific Overlay methods were examined in less detail by the CNA as the timeframe before relief must be implemented is too short to permit a Concentrated Overlay and implementation of WNP eliminates the Technology-specific Overlay method. Consequently, analysis of both these methods has been excluded from the IPD.

Future Projected Exhaust Dates were developed for all Relief Options using the assumption that the future Projected Exhaust Dates will not be significantly affected by any CO Code protection that would be required if there is any 7-digit local dialling across NPA boundaries after relief.

Equipment used by local exchange carriers to provide service in some exchanges, typically those serving small communities, is able to provide both 7 and 10-digit local dialling (permissive dialling), and can route calls to an announcement, e.g. when 10-digit dialling is mandatory, or an NPA has changed, but may not be able to connect a call following an announcement (i.e., cut-through), as is usually required during transition to an overlay. Investments that would be required to upgrade or replace network elements to provide transition announcements in some communities could be significant relative to their size, and such investments would provide a capability that would only be used for a short time, i.e. during the dialling transition period. It is therefore suggested that if the relief method that is adopted includes an overlay, then where a TSP's network equipment does not support an announcement followed by cut-through, the TSP would not be required to provide announcement plus cut-through during the transition period, and only be required to provide permissive 7/10 digit dialling in that community with no announcement until 10-digit dialling becomes mandatory. In such cases, TSPs would also be required to use additional and/or alternative methods of educating customers in the affected communities. Such methods of education could include, but may not be limited to, advertisements in local newspapers (in areas where local newspapers are published), notices provided to customer using their billing notification method (e.g. paper mail or email), and information on websites.

In Telecom Decision CRTC 2006-26, the CRTC addressed the above situation and established a process and requirements for carriers to follow. The RPC reviewed this Decision and recommends the following approach be adopted for NPA 418 which is based upon this Decision.

In situations where TSPs have network limitations in providing recorded announcements with call completion, and the provision of such announcements and call completion would be prohibitively expensive (e.g., for independent companies in small and/or remote locations served by legacy technology), it is recommended that such TSPs may submit written requests to CRTC staff seeking relief from the obligation of providing industry standard network announcements with automatic call completion on calls dialled using 7 digits prior to the implementation of mandatory 10-digit dialling. In such circumstances, those TSPs seeking relief shall be required to inform their customers of the 10-digit dialling requirement by:

- sending monthly bill inserts (to be submitted at least one month prior to insertion to CRTC staff for approval) in each of the 4 months immediately prior to the month when mandatory 10-digit local dialling is scheduled to be implemented;
- placing two notices in local newspapers (if available), one during the month prior to the month when mandatory 10-digit local dialling is scheduled to be implemented, and one during the month when mandatory 10-digit local dialling is scheduled to be implemented;
- sending a personal letter to each affected customer, to be received 10 days prior to the implementation date of mandatory 10-digit dialling; and
- placing information on the TSPs' websites in a prominent, highly visible location for the minimum period of about 5 months ending at the end of the month when mandatory 10-digit local dialling is scheduled to be implemented.

See Annex A, Figures 7 through 16 for diagrams of the Relief Options identified by the RPC.

The selection of an appropriate NPA for relief of NPA 418 is addressed in the Canadian NPA Relief Planning Guidelines. On the CNA web site there is a NPA Selection Tool that can be used to determine which NPAs that are currently available for assignment in Canada meet the criteria for NPA assignment contained in the Canadian NPA Relief Planning Guidelines. CO Codes 431 and 581 are the only 2 NXXs in the current list of Projected Future Canadian Geographic NPAs that meet the criteria that requires the relief NPA to not correspond to any CO Codes assigned in the home or neighbouring NPAs, in this case in NPAs 418, 506, 709 and 819. Further analysis of the Projected Future Canadian Geographic NPAs indicates that NPA 431 also meets the requirements as a future NPA for NPA 204 which has a Projected Exhaust Date of November 2016. The only other Projected Future Canadian Geographic NPA which could be used to relieve NPA 204 is NPA 579; however, NPA 579 is the only Projected Future Canadian Geographic NPA which can relieve NPA 450 which is projected to exhaust in September 2013. It is therefore recommended that NPA 581 be identified as the most suitable NPA for relief of NPA 418. See Annex B, Table 2 for details of the status in NPA 418 and Adjacent NPAs of NXXs that correspond to Projected Future Canadian Geographic NPAs.

### **6.1 Geographic Split**

Six different Relief Options were evaluated to introduce a new NPA in the NPA 418 area using the Geographic Split method of providing CO Code relief. With each of these options, number changes are required in the area that does not retain NPA 418.

#### **North-South Split Options 1a and 1b**

In two of the geographic split options (Plans 1a and 1b), NPA 418 is split into a northern portion and a southern portion along a boundary which starts in the West in the unserved area between

the Rivière-a-Pierre Exchange Area and the NPA 819 Exchange Area Lac Edouard, continues north of Parc-des-Laurentides below Hébertville and Laterrière, turns south to the north boundary of St-Tite-des-Caps, then east along that boundary across the St Lawrence, between St-Roch-des-Aulnaies and La Pocatière, and across an unserved area to the US border. The only existing wireline local calling between these northern and southern assignment areas is between La Pocatière (with 2 CO Codes) and St-Roch-des-Aulnaies (1 CO Code).

With this boundary, the NPA 418 population and assigned CO Codes would split as follows:

<i>NPA and Area</i>	<i>Estimated Population (Note 1)</i>		<i>Assigned CO Codes in NPA 418 (01-01-07)</i>
	<i>No. of People</i>	<i>% of Total NPA 418</i>	<i>% of Total NPA 418 CO Codes</i>
418 Northern Region	667,700	38.4%	48%
418 Southern Region	1,069,300	61.6%	52%

Note:

1. Populations based on 2006 estimates from [http://www.stat.gouv.qc.ca/regions/profils/region\\_00/region\\_00.htm](http://www.stat.gouv.qc.ca/regions/profils/region_00/region_00.htm), and lists of exchanges by NPA.

With these two options (Plans 1a and 1b); number changes would be required either in the northern or southern region (as defined above).

### **TELUS Québec LIR Split Options 2a and 2b**

Two of the geographic split options (Plans 2a and 2b) use the existing Local Interconnection Regions (LIRs) to define the split regions. The Exchange Areas within the LIRs in TELUS Québec's territory are included in one region and the remaining Exchange Areas are included in the second region.

With this boundary, the NPA 418 population and assigned CO Codes would split as follows:

<i>NPA and Area</i>	<i>Estimated Population (Note 1)</i>		<i>Assigned CO Codes in NPA 418 (01-01-07)</i>
	<i>No. of People</i>	<i>% of Total NPA 418</i>	<i>% of Total NPA 418 CO Codes</i>
418 TQ LIR Region	642,700	37%	39%
418 non-TQ LIR Region	1,094,300	63%	61%

Note:

1. Population estimates based on 2006 estimates from [http://www.stat.gouv.qc.ca/regions/profils/region\\_00/region\\_00.htm](http://www.stat.gouv.qc.ca/regions/profils/region_00/region_00.htm), and lists of exchanges by NPA and quantity of CO Codes assigned.

With these two options (Plans 2a and 2b), number changes would be required either in the TELUS Québec LIR region or the non-TELUS Québec LIR region (as defined above).

## St. Lawrence River Split Options 3a and 3b

In the remaining geographic split options (Plans 3a and 3b), an existing physical feature would be used as the boundary to split NPA 418. In these options, the St. Lawrence River would be the boundary separating NPA 418 Exchange Areas north of the river and NPA 418 Exchange Areas south of the river. With the St. Lawrence River as the split boundary, the Îles de la Madeleine would be grouped with the southern Exchange Areas and Port Menier, Îles aux Coudres and Île d'Orléans would be grouped with the northern Exchange Areas. With this boundary, the NPA 418 population and assigned CO Codes would split as follows:

<i>NPA and Area</i>	<i>Estimated Population (Note 1)</i>		<i>Assigned CO Codes in NPA 418 (01-01-07)</i>
	<i>No. of People</i>	<i>% of Total NPA 418</i>	<i>% of Total NPA 418 CO Codes</i>
418 North of St Lawrence	1,041,500	60.0%	60%
418 South of St Lawrence	695,400	40.0%	40%

Note:

1. Populations based on 2006 estimates from [http://www.stat.gouv.qc.ca/regions/profils/region\\_00/region\\_00.htm](http://www.stat.gouv.qc.ca/regions/profils/region_00/region_00.htm), and lists of exchanges by NPA.

With these two options (Plans 3a and 3b), number changes would be required in NPA 418 either north of or south of the St. Lawrence (as defined above).

The main attribute of a split is that the local dialling plan does not have to be changed in either portion of the split, and users in both NPAs could continue with 7-digit local dialling for calls within the old NPA and calls within the new NPA.

For local calls between the old NPA and the new NPA, and from either to other adjacent NPAs, the dialling either could either be changed to 10 digits, or could remain as 7 digits (except for calling to existing NPA 819 which is already 10-digits). If such dialling remains 7-digits, code protection would be required. Plans 1a and 1b would require the least code protection as they only add one pair of exchanges to the list of exchanges with cross-NPA-boundary local calling, and the protected codes could easily be used outside the protected exchanges. Retaining 7-digit dialling for local calls across NPA boundaries with Plans 2a, 2b, 3a and 3b would require very much larger quantities of protected codes, and have the potential to decrease the life of the relief NPA and impose a significant CO Code administrative burden.

### **6.1.1. Plan 1a: North-South Split Option - Southern region changes to New NPA:**

#### Description:

The northern portion of NPA 418, with 153 Exchange Areas, would retain NPA 418, and the southern portion of NPA 418, with 105 Exchange Areas, would be reassigned to a new NPA. The area that would retain NPA 418 contains the rapidly growing exchanges of Québec, St-Georges-de-Beauce, and Thetford Mines while the new NPA would contain the rapidly growing exchanges of Chicoutimi, Rivière-du-Loup and Rimouski. Using this option, approximately 1,069,300 people would be affected by a telephone number change to the new NPA.

After the split, NPA 418 and the new NPA would be expected to exhaust in 2037 and 2041 respectively.

Assessment:

The RPC does not recommend this Relief Option because 1,069,300 people would be affected by a telephone number change, which would be very inconvenient for those people and particularly expensive for business customers as they would be required to change their advertising, stationery, etc. In addition, costs for TSPs would be higher for a split due to the need to reprogram wireless telephones, change back-office support and billing systems, etc. The time required to implement this option would be longer than the time needed to implement an overlay, and the probability of being able to provide relief prior to exhaust using this method is reduced. In addition this plan would increase the number of relief planning areas in Québec and does not provide a direction for future reliefs. However, in the event that a split is ordered by the CRTC, Split options 1a) and 1b) are preferred over the other Split options as there would be minimal cross-NPA boundary local calling and therefore the amount of CO Code Protection that would be required would be minimal.

**6.1.2. Plan 1b: North-South Split Option - Northern region changes to New NPA**

Description:

The southern portion of NPA 418, with 105 exchanges, would retain NPA 418, and the northern portion of NPA 418, with 153 exchanges, would be reassigned to a new NPA. Around 667,700 people in NPA 418 would be affected by a telephone number change to the new NPA. The quantity of number changes required by this option is slightly lower than the quantity of number changes required by Plan 1a.

After this split, NPA 418 and the new NPA would be expected to exhaust in 2041 and 2037 respectively.

Assessment:

The RPC does not recommend this Relief Option because approximately 668,000 people would be affected by a telephone number change which would be very inconvenient for those people and particularly expensive for business customers as they would be required to change their advertising, stationery, etc. In addition, costs for TSPs would be higher for a split due to the need to reprogram wireless telephones, change back-office support and billing systems, etc. The time required to implement this option would be longer than the time needed to implement an overlay, and the probability of being able to provide relief prior to exhaust using this method is reduced. In addition this plan would increase the number of relief planning areas in Québec and does not provide a direction for future reliefs. Split options 1a) and 1b) are preferred over the other Split options for the reasons identified above.

### **6.1.3. Plan 2a: TELUS Québec LIR Split Option - Non-TELUS Québec LIR region changes to New NPA**

#### Description:

The portion of NPA 418 consisting of TELUS Québec LIR Exchange Areas, with 135 exchanges, would retain NPA 418, and the portion of NPA 418 consisting of Bell, Sogetel, and Telebec LIR Exchange Areas and Independent Exchange Areas, with 123 exchanges, would be reassigned to a new NPA. The area that would retain NPA 418 contains the rapidly growing exchanges of Baie Comeau, Donnacona, Montmagny, Rimouski, Sept-Îles, and St-Georges-de-Beauce while the new NPA would contain the rapidly growing exchanges of Québec, Chicoutimi, Rivière-du-Loup and Thetford Mines. Using this option, approximately 1,094,300 people would be affected by a telephone number change to the new NPA.

After the split, NPA 418 and the new NPA would be expected to exhaust in 2044 and 2034 respectively.

#### Assessment:

The RPC does not recommend this Relief Option because approximately 1,094,000 people would be affected by a telephone number change which would be very inconvenient for those people and particularly expensive for business customers as they would be required to change their advertising, stationery, etc. In addition, costs for TSPs would be higher for a split due to the need to reprogram wireless telephones, change back-office support and billing systems, etc. The time required to implement this option would be longer than the time needed to implement an overlay, and the probability of being able to provide relief prior to exhaust using this method is reduced.

This Relief Option would result in a mix of 7- and 10-digit local dialling in numerous exchanges with local dialling across the split boundaries or would require CO Code Protection if 7-digit local dialling were retained. The old and new NPAs would not be contiguous areas, and their boundaries would be difficult to communicate to customers. In addition this plan would increase the number of relief planning areas in Québec and does not provide a direction for future reliefs.

### **6.1.4. Plan 2b: TELUS Québec LIR Split Option - TELUS Québec LIR changes to New NPA**

#### Description:

The portion of NPA 418 consisting of Bell, Sogetel, and Telebec LIR Exchange Areas and Independent Exchange Areas, with 123 exchanges, would retain NPA 418, and the portion of NPA 418 consisting of TELUS Québec LIR Exchange Areas, with 135 exchanges, would be reassigned to a new NPA. Around 642,700 people in NPA 418 would be affected by a telephone number change to the new NPA. The quantity of number changes required by this option is slightly better than the quantity of number changes required by Plan 2a.

After this split, NPA 418 and the new NPA would be expected to exhaust in 2033 and 2045 respectively.

### Assessment:

The RPC does not recommend this Relief Option because approximately 643,000 people would be affected by a telephone number change which would be very inconvenient for those people and particularly expensive for business customers as they would be required to change their advertising, stationery, etc. In addition, costs for TSPs would be higher for a split due to the need to reprogram wireless telephones, change back-office support and billing systems, etc. The time required to implement this option would be longer than the time needed to implement an overlay, and the probability of being able to provide relief prior to exhaust using this method is reduced.

This Relief Option would result in a mix of 7-and 10-digit local dialling in numerous exchanges with local dialling across the split boundaries and would require CO Code Protection if 7-digit local dialling were retained. As indicated for option 2b above, the old and new NPAs would not be contiguous areas, the boundaries of which would be difficult to convey to customers. In addition this plan would increase the number of relief planning areas in Québec and does not provide a direction for future reliefs.

#### **6.1.5. *Plan 3a: St. Lawrence River Split Option - South of St. Lawrence changes to New NPA***

### Description:

The northern portion of NPA 418, with 114 exchanges, would retain NPA 418, and the southern portion of NPA 418, with 144 exchanges, would be reassigned to a new NPA. The area that would retain NPA 418 contains the rapidly growing exchanges of Québec, Baie Comeau, Chicoutimi, La Baie, and Sept-Îles while the new NPA would contain the rapidly growing exchanges of Levis, Rivière-du-Loup, Rimouski, St-Georges-de-Beauce, St-Nicolas, and Thetford Mines. Using this option, approximately 695,400 people would be affected by a telephone number change to the new NPA.

After the split, NPA 418 and the new NPA would be expected to exhaust in 2032 and 2046 respectively.

### Assessment:

The RPC does not recommend this Relief Option because approximately 695,000 people would be affected by a telephone number change which would be very inconvenient for those people and particularly expensive for business customers as they would be required to change their advertising, stationery, etc. In addition, costs for TSPs would be higher for a split due to the need to reprogram wireless telephones, change back-office support and billing systems, etc. The time required to implement this option would be longer than the time needed to implement an overlay, and the probability of being able to provide relief prior to exhaust using this method is reduced.

Although the new boundary would be more easily identified than Options 2a) and 2b), this Relief Option would result in a mix of 7 and 10-digit local dialling in exchanges that have local calling across the St Lawrence River or would require CO Code Protection if 7-digit dialling were retained. In addition this plan would increase the number of relief planning areas in Québec and does not provide a direction for future reliefs.

### **6.1.6. Plan 3b: St. Lawrence River Split Option - North of St. Lawrence changes to New NPA**

#### Description:

The southern portion of NPA 418, with 144 exchanges, would retain NPA 418, and the northern portion of NPA 418, with 114 exchanges, would be reassigned to a new NPA. Around 1,041,500 people in the NPA 418 would be affected by a telephone number change to the new NPA. The larger quantity of number changes required by this option is a drawback compared to the quantity of number changes required by Plan 3a.

After this split, NPA 418 and the new NPA would be expected to exhaust in 2046 and 2032 respectively.

#### Assessment:

The RPC does not recommend this Relief Option because approximately 695,000 people would be affected by a telephone number change which, as stated above for options 1a, 1b, 2a, 2b and 3a, would be very inconvenient for those people and particularly expensive for business customers as they would be required to change their advertising, stationery, etc. In addition, costs for TSPs would be higher for a split due to the need to reprogram wireless telephones, change back-office support and billing systems, etc. The time required to implement this option would be longer than the time needed to implement an overlay, and the probability of being able to provide relief prior to exhaust using this method is reduced.

As indicated for option 3a, although the new boundary is more easily identified than options 2a) and 2b), this Relief Option would result in a mix of 7 and 10-digit local dialling in exchanges with local calling across the St Lawrence River or would require CO Code Protection if 7-digit dialling were retained. In addition this plan would increase the number of relief planning areas in Québec and does not provide a direction for future reliefs.

## **6.2 Boundary Realignment**

Two options were evaluated to provide NPA relief using the Boundary Realignment method.

### **6.2.1. Plan 4a: Boundary Realignment of NPA 819 to overlay NPA 418 coincident with mandatory 10-digit local dialling in NPA 418**

#### Description:

This option would realign the NPA 819 boundary to create an expanded NPA 819 area that included the NPA 418 area. At the same time, the mandatory 10-digit local dialling now in effect in the original NPA 819 area would be extended to apply also in the NPA 418 area.

NPA 418 and NPA 819 would be expected to exhaust in 2012.

This option would reduce the number of separate Relief Planning areas in the province of Québec by one, and a total of 1 new NPA would be required in the NPA 418 and 819 areas during the next 20 years.

Assessment:

The RPC does not recommend this option because the relief it would provide is too short-lived.

Although this option avoids the requirement for a new NPA at the time of relief, a subsequent relief with a new NPA would be required by 2011 (before NPAs 418 and 819 exhaust in 2012) which is only about 4 years from now (May 2007). As NPA 819's Projected Exhaust Date is currently February 2015, this option would advance relief for NPA 819 by about 3 years from February 2014 to 2011.

**6.2.2. Plan 4b: Boundary Realignment of NPA 819 to overlay NPA 418 in phase 1, and mandatory 10-digit local dialling and new NPA to overlay NPAs 418 and 819 in phase 2**

Description:

In the first phase of relief, this option would realign the NPA 819 boundary to expand NPA 819 to include the NPA 418 area (only if required and potentially only on a temporary basis), while retaining 7-digit dialling. Any NPA 819 CO Code assignments required to be activated in exchanges in NPA 418 prior to the completion of phase 2 mandatory 10-digit local dialling would be subject to Special CO Code Assignment Practices.

In the second phase, a new NPA would be added to overlay the expanded NPA 819 and NPA 418 area, and the mandatory 10-digit local dialling effective since 2006 in the current NPA 819 area would be extended to apply also in the NPA 418 area. The boundary of NPA 819 for future CO Code assignment purpose could be returned to its original area, but could leave some NPA 819 CO Codes assigned in the NPA 418 area. The Special CO Code Assignment Practices would be discontinued when the transition to mandatory 10-digit local dialling in NPA 418 has been completed.

NPAs 418 and 819 and the new NPA would be expected to exhaust in 2027.

This option would reduce the number of separate Relief Planning areas in the province of Québec by one. One new NPA would be required for this relief and one new NPA would subsequently be required in the NPA 418 and 819 areas in 18 year's time.

Assessment:

With this option relief could be provided starting in phase 1 by activating NPA 819 CO Codes in the NPA 418 area as and when required prior to phase 2 mandatory 10-digit local dialling. Since NPA 819 is already assigned in Québec and activated throughout the NANP network, and since mandatory 10-digit local dialling is not required as part of phase 1, this option may provide relief sooner than all other options which require activation of a new NPA in phase 1 or waiting for completion of mandatory 10-digit local dialling. If the length of time required to implement relief using a single-phase distributed overlay option (plan 5a or 5c) extends beyond exhaust, then

this option may provide a way to avoid the adverse effects that a lack of CO Codes would have on carriers, particularly on those planning to compete in new markets and serve new customers.

During this phase, special network translations would be required for long distance routing to NPA 819 numbers in the NPA 418 area.

If it turns out that exhaust does not actually occur until after mandatory 10-digit dialling has been implemented, then with this option no NPA 819 CO Codes need be assigned in the NPA 418 area and the relief option ends up closely resembling the distributed overlay option plan 5c.

If exhaust did occur before mandatory 10-digit dialling, and some NPA 819 CO Codes were assigned in the NPA 418 area, then to minimize the presence of additional NPA 819 CO Codes in the NPA 418 area, CO Code demand after phase 2 could be satisfied using only the new NPA, and remaining NPA 819 CO codes could be restricted to assignments in the original NPA 819 area, which for future CO Code assignment purpose would in effect return the NPA 819 boundary to its original area, but could leave some NPA 819 CO Codes assigned in the NPA 418 area.

In addition, availability of CO Codes in the new NPA for assignment in the NPA 819 area could be deferred for a period in order to provide more time for carriers and customers to be prepared for the new NPA in the NPA 819 area.

This option could create additional customer and carrier confusion while 7-digit dialling remains in NPA 418 since some Exchange Areas in NPA 418 could have 10-digit local dialling to CO Codes in the existing NPA 819 area as well as 7-digit dialling to NPA 819 CO Codes assigned in the NPA 418 area.

This option would eliminate the need to initiate relief planning activity for NPA 819 in 2009. As NPA 819's Projected Exhaust Date is currently February 2015, this option would advance relief for NPA 819 by about 5 years from February 2014 to 2009.

### **6.3 Distributed Overlay**

Six Relief Options were evaluated to introduce a new NPA using the Distributed Overlay method of providing NPA relief.

#### **6.3.1. Plan 5a: Distributed Overlay of new NPA on NPA 418 coincident with mandatory 10-digit local dialling**

##### Description:

This Relief Option would introduce a new NPA to overlay NPA 418 when the transition to mandatory 10-digit dialling was completed. NPA 418 and the new NPA would be expected to exhaust in 2008 and 2041 respectively.

This option would not change the number of separate Relief Planning areas in the province of Québec. One new NPA would be required for this relief, and another new NPA may be required for the relief of NPA 819 within the next 20 years.

### Assessment:

The RPC views this distributed overlay of NPA 418 as a viable option because:

- Number changes are avoided thus minimizing negative impacts on customers and Wireless Service Providers (reprogramming of wireless handsets);
- The costs to implement an overlay by TSPs are expected to be less than for a split;
- No boundary changes of existing NPAs and no new boundaries within the NPA 418 area;
- With this option, 10-digit local dialling, which has been implemented in many Canadian NPAs, would become standard throughout the province of Québec. The adoption of 10-digit local dialling would be consistent with the evolution to 10-digit dialling for all local calls under the Uniform Dialling Plan as recommended by the Industry Numbering Committee and the Canadian Steering Committee on Numbering;
- The life of this relief (i.e., until 2041) would exceed the 8 year minimum period specified by the Canadian NPA Relief Planning Guidelines.

This option would not eliminate the need to initiate relief planning activity for NPA 819 in early 2009. However, this option could lead to a solution for NPA 819 relief when required; i.e., the relief NPA for NPA 418 could have its boundary extended to cover NPA 819.

### **6.3.2. *Plan 5b: Distributed Overlay of new NPA on NPA 418 in phase 1, and mandatory 10-digit local dialling in phase 2***

#### Description:

In the first phase of relief, this option would introduce a new NPA to overlay NPA 418, while retaining existing 7-digit dialling in NPA 418. Any New-NPA CO Code assignments required to be activated in exchanges in NPA 418 prior to the completion of phase 2 mandatory 10-digit local dialling would be subject to Special Practices for CO Code Assignments.

In the second phase, a transition to mandatory 10-digit local dialling would take place in the NPA 418 area. The Special Practices for CO Code Assignments would be discontinued when the transition has been completed.

NPA 418 and the new NPA would be expected to exhaust in 2008 and 2041 respectively.

This option would not change the number of separate Relief Planning areas in the province of Québec.

#### Assessment:

The RPC views this distributed overlay of NPA 418 as a viable option because:

- Number changes are avoided thus minimizing negative impacts on customers and Wireless Service Providers (reprogramming of wireless handsets);
- The costs to implement an overlay by TSPs are expected to be less than for a split;
- No boundary changes of existing NPAs and no new boundaries within the NPA 418 area;

- With this option, 10-digit local dialling, which has been implemented in many Canadian NPAs, would become standard throughout the province of Québec. The adoption of 10-digit local dialling would be consistent with the evolution to 10-digit dialling for all local calls under the Uniform Dialling Plan as recommended by the Industry Numbering Committee and the Canadian Steering Committee on Numbering;
- The life of this relief (i.e., until 2041) would exceed the 8 year minimum period specified by the Canadian NPA Relief Planning Guidelines.

With this option relief could be provided starting in phase 1 by activating new NPA CO Codes in the NPA 418 area prior to phase 2 mandatory 10-digit local dialling. This option may provide relief sooner than plans 5a and 5c which require waiting for completion of mandatory 10-digit local dialling before relief is provided. If a new NPA can be assigned and activated sooner than carriers and customers can implement mandatory 10-digit dialling, then this option could potentially avoid the adverse effects that a lack of CO Codes would have on carriers, particularly on those planning to compete in new markets and serve new customers.

This option would require the CNA to implement Special Practices for CO Code Assignments up until 66 days prior to the implementation of mandatory 10-digit local dialling.

This option would not eliminate the need to initiate relief planning activity for NPA 819 in early 2009. However, this option could lead to a solution for NPA 819 relief when required; i.e., the relief NPA for NPA 418 could have its boundary extended to cover NPA 819.

### **6.3.3. *Plan 5c: Distributed Overlay of new NPA on NPAs 418 and 819 coincident with mandatory 10-digit local dialling in NPA 418***

#### Description:

This Relief plan would introduce a new NPA to overlay NPAs 418 and 819 when the transition to mandatory 10-digit local dialling was completed in NPA 418.

NPAs 418 and 819 and the new NPA would be expected to exhaust in 2027.

This option would reduce the number of separate Relief Planning areas in the province of Québec by one. One new NPA would be required for this relief, and one new NPA would subsequently be required in the NPA 418 and 819 areas in 18 year's time.

#### Assessment:

This option could not provide relief until mandatory 10-digit local dialling has been implemented in NPA 418, which may mean that relief is not provided until after exhaust has occurred, with potentially adverse affects on all carriers, and particularly on those planning to compete in new markets and serve new customers.

This option would eliminate the need to initiate relief planning activity for NPA 819 in early 2009.

This option would address relief planning activity for NPA 819 in advance and potentially simplify the implementation of relief for NPA 819 when required.

This option would preclude the option of implementing a separate new NPA to overlay NPA 819.

With this option a new NPA would be introduced in NPA 819 about 5 years sooner than required if NPA 819 is relieved separately, which may advance the costs incurred by TSPs. However, the availability of CO Codes in the new NPA for assignment in the NPA 819 area could be deferred for a period in order to provide more time for carriers and customers to deal with the new NPA in the NPA 819 area.

**6.3.4. *Plan 5d: Distributed Overlay of new NPA on NPAs 418 and 819 in phase 1, and mandatory 10-digit local dialling in NPA 418 in phase 2***

Description:

In the first phase of relief, this option would introduce a new NPA to overlay NPAs 418 and 819, while retaining 7-digit dialling within the NPA 418 area. Any New-NPA CO Code assignments required to be activated in exchanges in NPA 418 prior to the completion of phase 2 mandatory 10-digit local dialling would be subject to Special Practices for CO Code Assignments.

In the second phase, mandatory 10-digit local dialling would be implemented in the NPA 418 area. The Special Practices for CO Code Assignments would be discontinued when the transition to mandatory 10-digit local dialling in NPA 418 has been completed.

NPAs 418 and 819 and the new NPA would be expected to exhaust in 2027.

This option would reduce the number of separate Relief Planning areas in the province of Québec by one. One new NPA would be required for this relief, and one new NPA would subsequently be required in the NPA 418 and 819 areas in 18 year's time.

Assessment:

This option would eliminate the need to initiate relief planning activity for NPA 819 in early 2009.

With this option relief could be provided starting in phase 1 by assigning new NPA CO Codes in the NPA 418 area as and when required prior to phase 2 10-digit mandatory local dialling. This option may provide relief sooner than options which require waiting for completion of mandatory 10-digit local dialling (plans 4a, 5a and 5c) before relief is provided. This approach may be a way to avoid the adverse effects that a lack of CO Codes would have on carriers, particularly on those planning to compete in new markets and serve new customers.

This option would address relief planning activity for NPA 819 in advance and potentially simplify the implementation of relief for NPA 819 when required.

This option would preclude the option of implementing a separate new NPA to overlay NPA 819.

With this option a new NPA would be introduced in NPA 819 about 5 years sooner than required if NPA 819 is relieved separately, which may advance the costs incurred by TSPs. However, the availability of CO Codes in the new NPA for assignment in the NPA 819 area could be deferred for a period in order to provide more time for carriers and customers to deal with the new NPA in the NPA 819 area.

**6.3.5. Plan 5e: Distributed Overlay of new NPA on NPA 418 coincident with mandatory 10-digit local dialling in NPA 418 in phase 1, Boundary Realignment of relief NPA to overlay NPA 819 in phase 2**

Description:

In the first phase of relief, this option would introduce a new NPA to overlay NPAs 418 when the transition to mandatory 10-digit local dialling was completed in NPA 418.

In the second phase, the boundary of the relief NPA would be realigned to overlay NPA 819 when relief is required for NPA 819. NPA 819 already has mandatory 10-digit local dialling.

After the boundary realignment, NPAs 418 and 819 and the new NPA would be expected to exhaust in 2027.

This option would reduce the number of separate Relief Planning areas in the province of Québec by one. One new NPA would be required for this relief, and one new NPA would subsequently be required in the NPA 418 and 819 areas in about 19 year's time.

Assessment:

This option could not provide relief until mandatory 10-digit local dialling has been implemented within NPA 418, which may mean that relief is not provided until after exhaust has occurred, with potentially adverse affects on all carriers, and particularly on those planning to compete in new markets and serve new customers.

This option would address relief planning activity for NPA 819 in advance and potentially simplify the implementation of relief for NPA 819 when required.

This option would preclude the option of implementing a separate new NPA to overlay NPA 819.

**6.3.6. Plan 5f: Distributed Overlay of new NPA on NPA 418 in phase 1, mandatory 10-digit local dialling in NPA 418 in phase 2, and Boundary Realignment of relief NPA to overlay NPA 819 in phase 3**

Description:

In the first phase of relief, this option would introduce a new NPA to overlay NPA 418, while retaining 7-digit dialling within the NPA 418 area. Any New-NPA CO Code assignments required to be activated in exchanges in NPA 418 prior to the completion of phase 2 mandatory 10-digit local dialling would be subject to Special Practices for CO Code Assignments.

In the second phase, mandatory 10-digit local dialling would be implemented in the NPA 418 area. The Special Practices for CO Code Assignments would be discontinued when the transition to mandatory 10-digit local dialling in NPA 418 has been completed.

In the third phase, the boundary of the relief NPA would be realigned to overlay NPA 819 when relief is required for NPA 819. NPA 819 already has mandatory 10-digit local dialling.

NPA 418 and 819 and the new NPA would be expected to exhaust in 2027.

This option would reduce the number of separate Relief Planning areas in the province of Québec by one. One new NPA would be required for this relief, and one new NPA would subsequently be required in the NPA 418 and 819 areas in 18 year's time.

Assessment:

This option would eliminate the need to initiate relief planning activity for NPA 819 in early 2009.

With this option relief could be provided starting in phase 1 by assigning new NPA CO Codes in the NPA 418 area as and when required prior to phase 2 10-digit mandatory local dialling. This option may provide relief sooner than options which require waiting for completion of mandatory 10-digit local dialling (plans 4a, 5a and 5c) before relief is provided. This approach may be a way to avoid the adverse effects that a lack of CO Codes would have on carriers, particularly on those planning to compete in new markets and serve new customers.

This option would address relief planning activity for NPA 819 in advance and potentially simplify the implementation of relief for NPA 819 when required.

This option would preclude the option of implementing a separate new NPA to overlay NPA 819.

## 7. SUMMARY OF RELIEF OPTIONS

The following table summarizes the alternative Geographic Split Options:

Plan		Projected Exhaust Dates			Relief - Timing & Type		Popula- tion affected by No. changes	Local Dial # of digits
#	Description	NPA 418	NPA 819	New NPA	Date (NPA being relieved)	Type		
1a	North-South Split - Southern region changes to New NPA	2008 2041	<i>n/a</i>	2037	<b>2008</b> (418) <b>2039</b> (418) <b>2035</b> (new NPA)	S ? ?	1.069m ? ?	7 ??
1b	North-South Split - Northern region changes to New NPA	2008 2037	<i>n/a</i>	2041	<b>2008</b> (418) <b>2035</b> (418) <b>2039</b> (new NPA)	S ? ?	.668m ? ?	7 ? ?
2a	TELUS Québec LIR Split - Non-TELUS Québec LIR region changes to New NPA	2008 2044	<i>n/a</i>	2034	<b>2008</b> (418) <b>2042</b> (418) <b>2032</b> (new NPA)	S ? ?	? ? ?	7 ? ?
2b	TELUS Québec LIR Split - TELUS Québec LIR changes to New NPA	2008 2033	<i>n/a</i>	2045	<b>2008</b> (418) <b>2031</b> (418) <b>2043</b> (new NPA)	S ? ?	? ? ?	7 ? ?
3a	St. Lawrence River Split - South of St. Lawrence changes to New NPA	2008 2032	<i>n/a</i>	2046	<b>2008</b> (418) <b>2031</b> (418) <b>2044</b> (new NPA)	S ? ?	.695m ? ?	7 ? ?
3b	St. Lawrence River Split - North of St. Lawrence changes to New NPA	2008 2046	<i>n/a</i>	2032	<b>2008</b> (418) <b>2044</b> (418) <b>2031</b> (new NPA)	S ? ?	1.042m ? ?	7 ? ?
4a	Boundary realignment of NPA 819 on NPA 418 coincident with 10-D	2008	2012		<b>2008</b> (418) <b>2010</b> (418/819)	O	Nil Nil	10 10
4b	Boundary realignment of NPA 819 on NPA 418 in phase 1; new NPA on NPAs 418 & 819 and 10-D in phase 2	2008 2032	2015 2032	2027	<b>2008</b> (418) <b>2025</b> (418/819/new)	O	Nil Nil	10 10
Key	10-D = mandatory 10-digit local dialling, O = Overlay, S= Split, ? = Unknown population affected by number changes, subsequent relief type and dial plan							

The following table summarizes the alternative Overlay and Boundary Realignment Options:

Plan		Projected Exhaust Dates			Relief - Timing & Type		Popula- tion affected by No. changes	Local Dial # of digits
#	Description	NPA 418	NPA 819	New NPA	Date (NPA being relieved)	Type		
5a	Distributed Overlay of new NPA on NPA 418 coincident with 10-D	2008	n/a	2041	<b>2008</b> (418) <b>2039</b> (new NPA)	O	Nil Nil	10 10
5b	Distributed Overlay of new NPA on NPA 418 in phase 1; 10-D in phase 2	2008	2015	2041	<b>2008</b> (418) <b>2039</b> (new NPA)	O	Nil Nil	10 10
5c	Distributed Overlay of new NPA on NPAs 418 & 819 coincident with 10-D	2008 2027	2015 2027	2027	<b>2008</b> (418) <b>2025</b> (418/819/new)	O	Nil Nil	10 10
5d	Distributed Overlay of new NPA on NPAs 418 & 819 in phase 1; 10-D in phase 2	2008 2027	2015 2027	2027	<b>2008</b> (418) <b>2025</b> (418/819/new)	O	Nil Nil	10 10
5e	Distributed Overlay of new NPA on NPA 418 coincident with 10-D in phase 1, Boundary Realignment of relief NPA on NPA 819 in phase 2	2008 2027	2015 2027	2027	<b>2008</b> (418) <b>2014</b> (819) <b>2025</b> (418/819/new)	O	Nil Nil	10 10
5f	Distributed Overlay of new NPA on NPA 418 in phase 1, 10-D in phase 2, Boundary Realignment of relief NPA on NPA 819 in phase 3	2008 2027	2015 2027	2027	<b>2008</b> (418) <b>2014</b> (819) <b>2025</b> (418/819/new)	O	Nil Nil	10 10
Key	10-D = mandatory 10-digit local dialling, O = Overlay, S= Split, ? = Unknown population affected by number changes, subsequent relief type and dial plan							

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

The Relief Planning Committee considered the Initial Planning Document (IPD) developed by the CNA and, based upon discussion, identified a total of 14 Relief Options for consideration. 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 418 within the next 20 years (P = 0 new NPAs; N = 1 new NPAs; C = 2 or more new NPAs)
- B. NPA Code Conservation – quantity of new NPAs required for NPA 819 within the next 20 years in addition to those required in NPA 418 (P = 0 new NPAs; N = 1 new NPAs; C = 2 or more new NPAs)
- C. Number of separate Relief Planning areas in Québec in the long term (P = decrease; N = stays same; C = increase)
- D. Quantity of Number Changes for existing customers' numbers (none = P, many = C)
- E. Level of Carrier Costs – e.g., including implementation, customer awareness, rate of return (P = Low; N = Medium; C = High)
- F. Time required to implement relief, i.e., time between the CRTC's Decision date and the date when CO Codes in the new NPA can be activated (shortest=P, medium = N, longest = C)
- G. Longevity – the length of time between this relief and subsequent relief activity in NPA 418 (e.g., a new area code) (P = 15 or more years; N = 9 through 14 years; C = within 8 years)
- H. Longevity – the length of time between this relief and subsequent relief activity in NPA 819 ((e.g., a new area code) (P = 15 or more years; N = 9 through 14 years; C = within 8 years)
- I. Geographic Identity – NPA boundaries align with boundaries of known areas (e.g., existing NPA areas, provinces) or identifiable geographical features (e.g., rivers, islands)(P = High; N = Medium; C = Low)
- J. Adds areas with mix of 7- and 10-digit local dialling in NPA 418 (none = P, minor amount = N, significant = C)
- K. Consistent with the transition towards universal 10-digit local dialling, the Uniform Dialling Plan and future NANP Expansion
- L. Reprogram Mobile Phones – requirement to reprogram wireless devices to accommodate the number changes (P = low; N = Medium; C = High)
- M. Potential maximum quantity of NPAs in an Exchange Area in the next 20 years (1 NPA = P, 2 NPAs = N, 3 NPAs = C)
- N. Does the option consider the potential direction for future reliefs in NPA 819? (P = Yes; C = No)
- O. Mix of 7- and 10-digit local dialling from NPA 418 to NPA 819 prior to mandatory 10-digit local dialling (P = No; C = Yes)

Relief Plan		Pro, Neutral or Con for Each Attribute															Rating
#	Description	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1a	North-South Split - Southern region changes to New NPA	N	N	C	C	C	C	P	C	N	N	C	C	P	C	P	-5
1b	North-South Split - Northern region changes to New NPA	N	N	C	C	C	C	P	C	N	N	C	C	P	C	P	-5
2a	TELUS Québec LIR Split - Non-TELUS Québec LIR region changes to New NPA	N	N	C	C	C	C	P	C	C	C	C	C	P	C	P	-7
2b	TELUS Québec LIR Split - TELUS Québec LIR changes to New NPA	N	N	C	C	C	C	P	C	C	C	C	C	P	C	P	-7
3a	St. Lawrence River Split - South of St. Lawrence changes to New NPA	N	N	C	C	C	C	P	C	P	C	C	C	P	C	P	-5
3b	St. Lawrence River Split North of St. Lawrence changes to New NPA	N	N	C	C	C	C	P	C	P	C	C	C	P	C	P	-5
4a	Boundary realignment of NPA 819 on NPA 418 coincident with 10-D	C	P	P	P	N	N	C	C	C	P	P	P	C	P	C	1
4b	Boundary realignment of NPA 819 on NPA 418 in phase 1, and new NPA on NPAs 418 & 819 and 10-D in phase 2	C	P	P	P	N	P	P	P	C	P	P	P	C	P	C	6
5a	Distributed Overlay of new NPA on NPA 418 coincident with 10-D	N	N	N	P	N	N	P	C	P	P	P	P	N	C	P	5
5b	Distributed Overlay of new NPA on NPA 418 in phase 1, 10-D in phase 2	N	N	N	P	N	P	P	C	P	P	P	P	N	C	P	6
5c	Distributed Overlay of new NPA on NPAs 418 & 819 coincident with 10-D	C	P	P	P	N	N	P	P	N	P	P	P	N	P	P	9
5d	Distributed Overlay of new NPA on NPAs 418 & 819 in phase 1, 10-D in phase 2	C	P	P	P	N	P	P	P	N	P	P	P	N	P	P	10
5e	Distributed Overlay of new NPA on NPA 418 coincident with 10-D in phase 1, Boundary Realignment of relief NPA on NPA 819 in phase 2	C	P	P	P	N	N	P	P	N	P	P	P	N	P	P	9
5f	Distributed Overlay of new NPA on NPA 418 in phase 1, 10-D in phase 2, Boundary Realignment of relief NPA on NPA 819 in phase 3	C	P	P	P	N	P	P	P	N	P	P	P	N	P	P	10

Notes:

1. None of the options require Exchange Area boundary changes.
2. For the purposes of this matrix, it is assumed that Plans 1a, 1b, 2a, 2b, 3a and 3c will retain 7-digit local dialling.

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 10 points to Plan 5d and 5f, and the next highest rating of 9 points to Plan 5c and 5e and 6 points to plans 4b and 5b.

## 9. RECOMMENDATIONS

The RPC does not recommend any of the Geographic Split or Boundary Realignment options, and recommends a Distributed Overlay based on the following factors:

- Customer telephone number changes are not required, thus minimizing negative customer impacts.
- Wireless communication devices do not have to be reprogrammed and therefore customers will not be inconvenienced by having to take their sets to their service providers for reprogramming.
- No existing telephone industry (e.g., rate center, exchange and wire center) or political boundaries are impacted.
- Costs for TSPs would be lower with an overlay due to the avoidance of the need to reprogram wireless telephones, and lower costs for changes to back-office support and billing systems, etc.
- Coverage areas for existing NPAs would remain as they are today without creating potential customer confusion and some NPA 819 CO Codes located in the serving area of NPA 418 and its overlay NPA.
- Local dialling plans would be consistent throughout the NPA, and implementation of 10-digit local dialling would be consistent with recent NPA Relief in the province (NPAs 514, 450 and 819) and with the industry recommended adoption of a 10-digit Uniform Dialling Plan.
- All NPAs in the province of Québec would be converted to the new mandatory 10-digit local dialling environment, thus making local dialling consistent throughout the province of Québec.

Distributed Overlay options 5c and 5d are not recommended as viable options for two reasons:

- 1) They would advance costs of providing relief for NPA 819 to an earlier date than otherwise necessary.
- 2) They could result in additional delays in the relief planning and approval process that could adversely impact the relief date for NPA 418.

Distributed Overlay options 5a and 5b provide two viable options for the relief of NPA 418 without setting a direction for the future relief of NPA 819. Distributed Overlay options 5e and 5f also provide two viable options for the relief of NPA 418 and in addition set a direction for the future relief of NPA 819.

Although the RPC sees merit in options 5e and 5f, the RPC does not recommend them since the Projected Exhaust Date for NPA 819 is February 2015 and a final decision on a relief option for NPA 819 would be premature at this time.

If a CRTC Decision is issued by the end of August 2007, the RPC believes that option 5a can be implemented by September 2008 with a 7- to 10-digit dialling transition period between June and September 2008. However, if a CRTC Decision is not issued by the end of August 2007, then this option may not provide relief until after exhaust has occurred, with potentially adverse effects on carriers, and particularly on those planning to compete in new markets and serve new customers. In the event that a CRTC Decision is not issued by the end of August 2007 or immediately, thereafter then the RPC submits that option 5b might have to be implemented to

avoid a CO Code and numbering shortage and the Relief Implementation Plan will have to be revised.

If the CRTC directs implementation of option 5b, then the RPC notes that Special Practices for CO Code Assignments must be applied to any CO Codes that are assigned in the NPA 418 area from the relief date until two months prior to the completion of mandatory 10-digit local dialling.

The RPC prefers option 5a over option 5b because:

- a Consumer Awareness Program can be implemented in a single phase, which is easier to explain and is less confusing and easier to implement by customers; and,
- it would avoid Special Practices for CO Code Assignments.

Based upon its analysis of the Relief Options the RPC recommends that:

- relief for NPA 418 be implemented using the Distributed Overlay option 5a if a CRTC Decision can be obtained by the end of August 2007 and, if not, by using Distributed Overlay option 5b;
- NPA 581 be selected as the Relief NPA for NPA 418. The rationale for this recommendation is explained in more detail in the last paragraph of the introductory part of section 6;
- the relief date be 19 September 2008 in accordance with the schedule contained in this planning document;
- if Distributed Overlay Relief option 5a is approved by the end of August 2007, it be implemented with a 7- to 10-digit dialling transition period from 23 June 2008 to 8 September 2008 in accordance with the schedule;
- a standard network announcement be implemented during the 7- to 10-digit local dialling transition period;
- the local dialling plan for customers within the NPA 418 area be changed to 10-digits for all local calling originating within the NPA 418 area;
- 7-digit local dialling that currently exists from Campbellton in NPA 506 (New Brunswick) and from Labrador City – Wabush in NPA 709 (Newfoundland-Labrador) into NPA 418 be allowed to continue after NPA 418 relief;
- three CO Codes from NPA 418 should be initially set aside in a "Pool for Initial Code Assignments" to entities making an application for an Initial Code in an exchange during the two year period following the introduction of the overlay NPA and that the quantity of set aside codes be increased to ten (or as many are still available, if less than ten) 66 days prior to relief;
- if a Distributed Overlay option is approved, the RPC recommends that where a TSP's network equipment does not support an announcement followed by cut-through, the TSP would not be required to provide announcement plus cut-through during the transition period, and only be required to provide permissive 7/10 digit dialling with no announcement until 10-digit dialling becomes mandatory. In such cases, TSPs would also be required to use additional and/or alternative methods of educating customers in the affected communities. Such methods of education could include, but may not be limited to, advertisements in local newspapers (in areas where local newspapers are published), notices provided to customer using their billing notification method (e.g. paper mail or email), and information on websites;

- NPA 418 CO Codes 273, 367, 437, 460, 468, 474, 506, 537, 579, 709, 753, and 942, which are assignable in a Jeopardy Condition should remain assignable when the Jeopardy Condition ends, with some limited availability for CO Code 506. See the NPA 418 CO Code Inventory Chart in the Jeopardy Contingency Plan for details; and
- when NPA 819 relief is addressed, this RPC recommends the NPA 819 RPC and the CRTC consider extending the boundary of the new NPA used to relieve NPA 418 to cover the NPA 819 area, as the NPA 418 RPC views this as a desirable option unless there are significant changes in circumstances. This proposal for the future relief of NPA 819 is based on the current forecast of future requirements in NPAs 418 and 819. Carriers and customers should not take any action based on a future boundary extension of the new NPA over NPA 819 until a final CRTC Decision is issued on NPA 819 closer to its relief date.

## 10. DIALLING CHANGES FOR LOCAL CALLS

The following tables reflect the dialling arrangement for Local calls only for Splits and Overlays.

The Toll call dialling arrangement for NPA 418 is not impacted due to the NPA relief.

Currently, there is 7-digit local dialling between the following locations in NPA 418 and NPAs 506/709.

NPA 418 Exchange Areas	NXXs	Status of Corresponding NXX in Neighbouring NPA	Neighbouring NPA	Exchange Area	NXXs	Status of corresponding NXX in NPA 418
Fermont (Telebec)	418-287	Available outside of Labrador City - Wabush area	709	Labrador City – Wabush, NL	709-280 709-282 709-285 709-288 709-944	All are assigned in locations remote to Fermont PQ, except 418-944 which is available for assignment in a location remote to Fermont, PQ
Matapédia (Telus Quebec)	418-865	Available outside of Campbellton Local Calling Areas	506	Campbellton, NB	506-753 506-759 506-760 506-789 509-790	All are assigned in locations remote to Matapédia and Point-à-la-Croix PQ, except 418-753 which is a future Canadian NPA and therefore not available for assignment
Pointe-à-la-Croix (Telus Québec)	418-788	Available outside of Campbellton Local Calling Areas				

The table below identifies recommended modifications to the dialling plan for local calls originating within the NPA 418 area.

### Local Dialling Plan for Customers in NPA 418 & the new Overlay NPA

Dial Plan Scenarios	Today	After 418 Overlay
Landline to Wireless within NPA 418	7-(&10)* digits	10-digits
Landline to Wireless from NPA 418 to adjacent NPAs	10-digits	10-digits

Dial Plan Scenarios	Today	After 418 Overlay
Landline to Landline within NPA	7- (&10)* digits	10-digits
Landline to Landline from NPA 418 to NPAs 506 and 709	7-(&10)* digits	10-digits
Landline to Landline from NPA 418 to NPA 819	10-digits	10-digits
Wireless to Wireless within NPA	7/10/11-digits	10/11-digits
Wireless to Wireless from NPA 418 to adjacent NPAs	10/11-digits	10/11-digits

\* Note: Today 10-digit local dialling is provided on a permissive basis in almost all cases as well as 7-digits

The dialling plan for exchange areas in NPAs 506, 709 and 819 will not change. See the tables below.

**Local Dialling Plan for Customers in Neighbouring Exchange Area of Campbellton NB in NPA 506 and Labrador City – Wabush NL in NPA 709 (No Change)**

Dial Plan Scenarios	Today	After 418 Split	After 418 Overlay
Landline to Wireless from NPAs 506 and 709 to NPA 418	10-digits	10-digits	10-digits
Landline to Landline from NPAs 506 and 709 to NPA 418	7-digits	7/10-digits**	7/10-digits**
Wireless to Wireless from NPAs 506 to NPA 418	10/11-digits	10/11-digits	10/11-digits

\*\*7-digit local dialling from NPA 506 could be retained after an overlay or split of NPA 418 subject to a small amount of CO Code protection being added in the new NPA if the relief is an overlay, or if a split changes the portion of NPA 418 adjacent to NPAs 506 to a new NPA.

**Local Dialling Plan for Customers in Neighbouring NPA 819**

Dial Plan Scenarios	Today	After 418 Split	After 418 Overlay
Landline to Wireless from NPA 819 to NPA 418	10-digits	10-digits	10-digits
Landline to Landline from NPA 819 to NPA 418	10-digits	10-digits	10-digits
Wireless to Wireless from NPA 819 to NPA 418	10/11-digits	10/11-digits	10/11-digits

## 11. SPECIAL OVERLAY POOL FOR INITIAL CODE ASSIGNMENTS

In CRTC Decision 2001-365 *Assignment of central office codes following relief of an area code*, the Commission directed that a pool of CO Codes be made accessible to any carrier applying for an initial code in a particular Exchange Area following the introduction of a new area code using the overlay method (called the "Pool for Initial Code Assignments").

Specifically, the CRTC directed that:

- a) a pool of CO codes be set aside for assignment to any carrier requesting an initial code, as described by the Canadian Central Office (NXX) Code Assignment Guidelines, for a particular exchange. CO codes assigned from this pool should not be replaced. This pool will be maintained for a period of only two years following the introduction of a new area code to avoid an undue impact on the exhaust of the new area code. Where such a pool exists, all initial code assignments shall be made from the pool. In cases where the Commission has not established the number of CO codes for this special pool, the appropriate CISC Ad Hoc Relief Planning Committee may make a recommendation to the Commission via the CISC process with regard to the number of CO codes for the pool; and
- b) all other CO codes remaining in the original area code and that are not part of the pool set aside for use as initial codes may be assigned using the normal administrative procedures set out in the Canadian Central Office (NXX) Code Assignment Guidelines.

The Canadian NPA Relief Planning Guidelines state in paragraph 2 of section 7.2, Overlay Method, that:

Following the implementation of an overlay, an appropriate number of CO Codes are set aside for Initial Code Applicants for a period of two years after the Relief Date (Letter Decision CRTC 2001-365). The quantity of CO Codes set aside following relief should be equivalent to the quantity set aside for this purpose in the case of a Jeopardy Condition as per section 9.1 of these guidelines.

In paragraph 5 of section 9.1 of those guidelines, it states:

The RPC shall recommend a quantity of CO Codes to be set aside, on the NPA CO Code Inventory Chart, for Initial Code Applicants whose requirements were not considered in the first J-COCUS. The quantity to be set aside for such Initial Code Applicants shall be based upon an assessment of the quantity of exchange areas in the NPA and the potential for Initial Code Applicants to enter the market in those exchange areas. The quantity of set aside Codes for FNEs [stet] should be recommended by the CNA in the IPD and approved or modified by the Relief Planning Committee (RPC), CISC and CRTC. This pool of CO Codes for Initial Code Applicants shall be used for initial Code assignments to [stet] until relief is provided.

In the Glossary of those guidelines, the term Initial Code Applicant is defined as follows:

Any entity making an application for an initial code in an exchange within the exhausting NPA as per section 4 of the Central Office Code Assignment Guidelines.

In establishing the "Pool for Initial Code Assignments", the RPC considered that NPA 418 consists of 258 Exchange Areas. In the Initial Planning Document (IPD), the CNA indicated that the majority of the projected growth in NPA 418 is mainly limited to 6 Exchange Areas, and that in the remaining Exchange Areas there is little projected growth. Those 6 Exchange Areas are: Québec, Rimouski, Chicoutimi, Rivière-du-Loup, St-Georges-de-Beauce and Thetford Mines. Using the April 2007 J-NRUF results, the annual growth in CO Codes projected to be assigned during the next 5 years varies significantly, with an average of 23 per year. A significant portion of the annual growth in the 6 Exchange Areas is expected to be for TSPs that already have CO Code assignments in those 6 Exchange Areas. Recent experience with new entrants in the CLEC and wireless sectors suggests there will be few new entrants requesting initial code assignments in the 2 year period after the implementation of the overlay. It is also expected that there will be only a small quantity of requests from existing TSPs for initial code assignments in the 6 growing exchange areas and the no/low growth Exchange Areas during the two-year period.

Since the time between the relief date and the Projected Exhaust Date is unusually short, it is necessary to minimize the quantity of set-aside CO Codes in order to minimize their impact on the Projected Exhaust Date. Given this requirement and the expectation of low initial CO Code growth following relief as described in the previous paragraph, the RPC recommends that 3 CO Codes should initially be set-aside in the "Pool for Initial Code Assignments" for the two year period following the implementation of the overlay 581 area code.

While 3 CO Codes may be sufficient to accommodate the need for initial code requests for the two-year period following the introduction of the overlay NPA, there is also a significant probability that more than 3 initial CO Codes will be requested during the two year period following relief.

To allow for this possibility, the RPC recommends that 66 days prior to the relief date, an additional 7 CO Codes (or as many as are still available if less than 7) be added to the 3 already set aside in NPA 418 for initial code assignments. Increasing the quantity to 10 CO Codes at that time will not limit the ability of applicants to obtain growth CO Codes, since growth CO Codes assigned in the new NPA at that time can be activated in the minimum interval. CO Codes in the pool for initial code applicants would be available only to initial code applicants during the period starting 66 days before the relief date and ending 2 years after the relief date or when the pool is exhausted whichever is sooner.

After the 2-year period, the pool will be discontinued and any CO Codes remaining in the pool will become available to all TSP's.

The RPC notes that the CO Codes in the pool for initial code assignments are separate from and additional to an allowance for "new unknown entrants, new technologies, or other unforecasted demand". This allowance is described in a letter from CRTC staff to the CNA on 26 March 2003 which requested the CNA set aside 3 CO Codes in NPA 418 for that purpose and to carry the same quantity forward throughout the 20-year study period of the 2003 G-NRUF. Per subsequent directions from the CSCN to the CNA regarding NRUF methodology and assumptions, the 3 CO Codes for New Entrants have continued to be included in the quantity of unassignable CO codes used with NRUF results to project NPA exhaust dates. The

CNA's web page for NPA 418 at [www.cnac.ca/data/ac418.htm](http://www.cnac.ca/data/ac418.htm) already shows 3 CO Codes in NPA 418 with the status "New Entrants Reserved" and with the remark "Reserved New Entrants - Can be made available upon request".

## 12. REVISED JEOPARDY CONTINGENCY PLAN – NPA 418

On May 2, 2007 industry stakeholders submitted a Jeopardy Contingency Plan (JCP) for NPA 418 to the Commission. On May 28, 2007 the Commission released Telecom Public Notice CRTC 2007-8 in which the CRTC approved the JCP submitted by the industry stakeholders. The Relief Planning Committee reviewed the JCP submitted by stakeholders during its deliberations of the Planning Document and hereby submits a revised JCP for CRTC approval.

The following measures shall be implemented by all CO Code Holders in NPA 418 once approved by the CRTC.

- 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 this Jeopardy Contingency Plan is approved:
  - 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 the CRTC approved the May 28, 2007 Jeopardy Contingency Plan, CO Code Holders shall submit a Part 1 Form for each remaining reserved CO Code to the CNA to return the reserved CO Code or to request assignment of the reserved CO Code. After this 45-day period, any reserved CO Code for which the CNA has not received a Part 1 Form requesting its assignment or returning it shall be made available by the CNA for general assignment with no aging period. Within 60 days from the date that this Jeopardy Contingency Plan becomes effective, the CNA shall report to CRTC staff and the RPC as to how many of these codes have been assigned or made available for

- h) general assignment;
  - i) reservations of CO Codes will not be permitted;
  - i) CO Codes assigned prior to May 28, 2007 must be placed In-Service by August 28, 2007. 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, the In-Service date will be delayed by no more than two additional months beyond the four month period, 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 will be delayed to more than six months from the original application date, then the CNA shall reclaim the Code unless CRTC staff advises otherwise.
- 4) When applying for a CO Code for growth for the switching entity/POI serving an Exchange Area, CO Code Holders shall:
- 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 in that exchange by that switching entity or POI, are projected to exhaust within four months and provide supporting documentation (i.e., completed 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 the Jeopardy Contingency Plan becomes effective, whichever is later. In the event that the Code Applicant does not submit the certification within 60 days of the date the Jeopardy Contingency Plan becomes effective, 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 the date of application. In the event that a CO Code Holder is unable to place the CO Code In-Service within four months of the date of application, 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 subsequent NRUF inputs with the January 2007 R-NRUF inputs, in order to assess forecasting trends. The CNA shall monitor all inputs and shall test them for reasonableness in consultation with the TSP. If the CNA is dissatisfied with the reasonableness, or the rationale provided for the deviations, then the matter will be referred to Commission staff.
  - 8) The CNA will request J-NRUF input from all potential and current CO Code Holders quarterly starting in June 2007, until 4 months before relief is provided. The January 2007 R-NRUF input will be used as a baseline for comparison of subsequent J-NRUF inputs 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 TSP. 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 the most recently required NPA 418 NRUF from a Code Holder or proposed Competitive Local Exchange Carrier (CLEC), the CNA will request a completed NRUF from that entity prior to the assignment of a CO Code.
  - 10) When a CO Code Applicant requests more CO Codes than it identified in its January 2007 R-NRUF or most recent subsequent NPA 418 J-NRUF, 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 [the date identified on the NPA CO Code Inventory Chart]" have been assigned.
  - 12) After each J-NRUF, the CNA shall provide Commission staff 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 66 days before the NPA Relief Date. This period of time is specified since a CO Code Applicant needing to activate a new CO Code in the minimum amount of time and applying for a CO Code 66 days prior to the NPA Relief Date can receive a CO Code in the post-Relief NPA.
  - 14) Exceptional issues or concerns may be referred by the CNA, or by individual entities (with a courtesy copy to the CNA), to Commission staff 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, 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.).



### NPA 418 CO Code Inventory Chart

The following chart and the instructions it contains will apply in NPA 418 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 418 assigned and in-service as at July 11, 2007. It identifies 36 CO Codes that are unassignable prior to a Jeopardy Condition, 15 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.

<b>A</b>	Total CO Codes In an NPA (NXX format)	<b>800</b>
<b>B</b>	<b>CO Codes unassignable prior to a Jeopardy Condition:</b>	
	N11 Service Codes (211, 311, 411, 511, 611, 711, 811, 911)	8
	Special Use Codes (555, 950 & 976)	2
	Protected Codes	0
	Home NPA(s) (418)	1
	Current Neighbouring NPAs (506, 709, 819)	3
	Future Canadian Geographic NPAs (see Note 1)	12
	Plant Test Codes (958 & 959)	2
	Special 7-digit Dialling Codes (610 & 810)	2
	911 Misdial Codes (912, 914 & 915)	3
	CO Codes set aside for assignment to Future New Entrants after Relief	3
	Subtotal	<b>36</b>
<b>C</b>	Assignable CO Codes prior to Jeopardy (C=A-B)	<b>764</b>
<b>D</b>	<b>CO Codes unassignable prior to Jeopardy that become assignable in a Jeopardy Condition:</b>	
	Future Canadian Geographic NPAs - assign 273, 367, 437, 460, 468, 474, 537, 579, 753, 942; do not assign 431 & 581 (potential future PQ or NL NPAs)	10
	911 Misdial Codes (912, 914 & 915)	3
	Current Neighbouring NPAs (assign 506 in NPA 418 north of St Lawrence only, 709 in western portion of NPA 418 only; do not assign 819)	2
	Subtotal	<b>15</b>
<b>E</b>	Assignable CO Codes in a Jeopardy Condition (E=C+D)	<b>779</b>
<b>F</b>	Assigned CO Codes as of July 11, 2007	<b>712</b>
<b>G</b>	Net CO Codes available for assignment as of July 11, 2007 without Jeopardy Condition (H=C-F)	<b>52</b>
<b>H</b>	Net CO Codes available for assignment as of July 11, 2007 in a Jeopardy Condition (I=E-F)	<b>67</b>

Note 1: 25 out of a total 37 Future Canadian Geographic NPAs are already assigned as CO Codes in NPA 418

**NPA 418**  
**PLANNING DOCUMENT**

**ANNEXES**